THE BEST SELLING MAGAZINE FOR THE

AMSTRAD PCW

8000 PLUS

8256 • 8512 • 9512

Dubl ISSUE 21 • JUNE 1988 • £1.50

EXCLUSIVE

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MASTERFILE 8000

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MASTERFILE 8000, the subject of so many enquiries, is now available.

MASTERFILE 8000 is a totally new database product. While drawing on the best features of the CPC versions, it has been designed specifically for the PCW range. The resulting combination of control and power is a delight to use.

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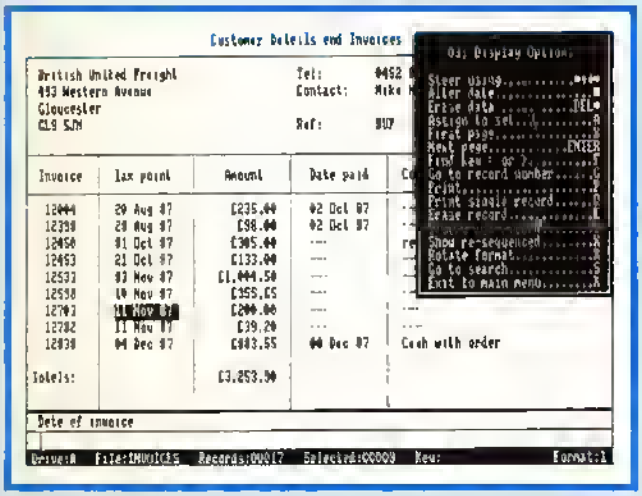
All screen work is done graphically — and hence we offer unique panel, box, and ruled line options. Choose the line spacing at pixel resolution — you will be amazed how much clearer 9-pixel lines are than the usual 8-pixels. (Study the picture.) And all this faster than CP/M normally lets you paint the screen! PCW printer functions, under menu control, are provided.

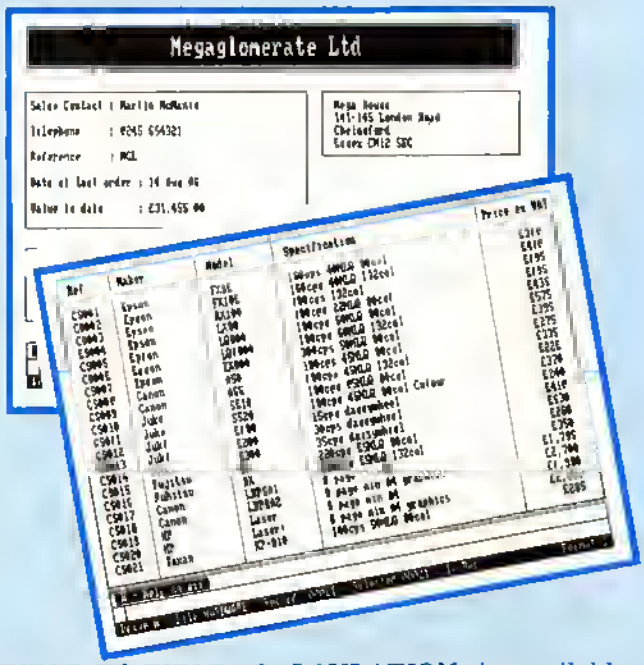


Keyed files are maintained automatically in key sequence, with never any need to sort. You can have unkeyed files too, where records can be inserted at any point in the file.

Any file can make RELATIONAL references to up to EIGHT read-only keyed files, the linkage being effected purely by the use of matching file and data names.

You can import/merge ASCII files (e.g. from MASTERFILE III), or export any data (e.g. to a word-processor), and merge files. For keyed files this is a true merge, not just an append operation. By virtue of export and re-import you can make a copy of a file in another key sequence. New data fields can be added at any time.

File searches combine flexibility with speed. (MASTERFILE 8000 usually waits for you, not the other way around.) You can even assign subsets of a file into one or more of seven pigeon-holes for subsequent reference or further manipulation.



FIELD-TO-FIELD CALCULATION is available, using any mixture of terms and arithmetic operators + — * / ( ).

MASTERFILE 8000 is totally menu-driven, fully machine-coded, and comes with example files and a detailed manual. We claim (modestly) that you will not find another filing system with such power, flexibility, and friendliness.

MASTERFILE 8000 costs £49.95 including VAT and P&P to anywhere in Europe. Elsewhere please add 20% for air-mail service. ACCESS/VISA/MASTERCARD orders are welcome, written or telephoned, quoting card expiry date. Make cheques payable to "Campbell Systems".

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OPENING MENU
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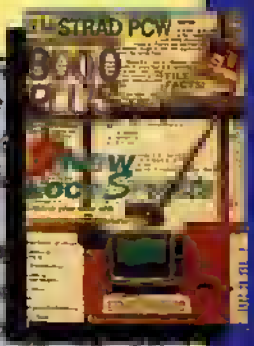

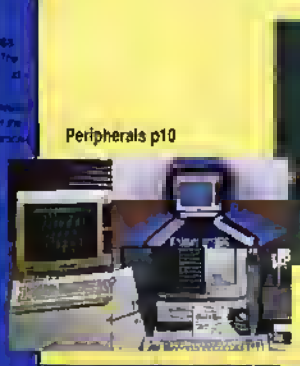
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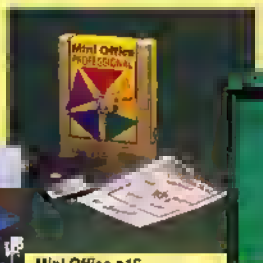

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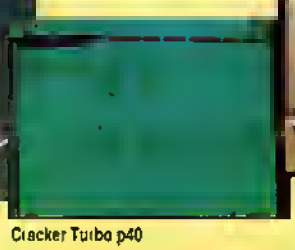
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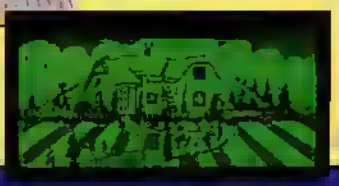
Time &Magik p57

LocoScript 2 is the new word processor for your PCW8000. Now, for just £34.90, you can get LocoScript 2 complete with LocoSpell, the integrated spelling checker and corrector.

• Faster movement around documents • Jump direct to a page • Word count facility • Save and continue from last position • Improved character shapes on the built-in printer • Choice from over 200 matrix, daisywheel or laser printers (may require the Extra Printer Drivers Disc) • Extended range of characters and symbols • Greek and Cyrillic text • Accents with any character • Improved word processing features • Printing of multiple copies • Disc copying and formatting direct from LocoScript • Check spelling without any disc changes • Correction of simple typing mistakes • Three dictionaries supplied by Longman, the largest with over 77,000 words • Your own dictionaries of special words and names • Online dictionary for looking up difficult words as you type • (SiC) marker for special spellings • Completely revised user guides

The LocoScript 2 Family *from* LOCOMOTIVE SOFTWARE

LocoMail adds a complete programming language to LocoScript 2 – but don't panic, you can use it simply and powerfully for your mailshots too.

• Produce a mailshot by merging a standard letter with a mailing list • Produce letters for each name or data record, or just for a selection • Include special text depending on the data to be merged – each version of your text is correctly laid out, whatever special information you insert • Edit the merged letter before printing • Save the result to disc if required • Use LocoScript data files or ASCII data files from a CP/M program • Prompt for information to be typed at the keyboard • Perform arithmetic within LocoScript documents • Produce sophisticated LocoMail 'programs' for Invoicing, Credit Control, Enquiries etc.

LocoMail now comes with a completely revised 288 page User Guide – available separately for users of the PCW9512 and earlier versions of LocoMail.

• An extended tutorial section • Detailed descriptions of the advanced facilities • Worked examples of "program units", loops and conditional operations • Descriptions of typical uses of LocoMail – Club Membership, Invoicing, Enquiries, Labels • A set of "building blocks" to incorporate in your own LocoMail applications • Full technical description of LocoMail • Troubleshooting guide

All the examples are supplied on the LocoMail master disc, or on the LocoMail Examples Disc, available separately.

To: Katy Buchan, Locomotive Systems
Allen Court, Dorking, Surrey, RH4 1YL
Phone (0306) 740606

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☐	LocoMail	£29.95
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BEHIND THE TIMES?

Remember the old Morris 1000s? There are still plenty of them knocking about, and many of them in pretty good shape. As anyone who's ever driven one will testify, they may not be the quickest or most comfortable cars ever built, and they certainly were never the most glamorous. The technology was never state-of-the-art even in the fifties, but they have always been reliable and the ideal no-nonsense car for people who just want, like those characters in maths problems, to get from A to B. And here they are, thirty years on, still going.

The PCW has more or less established itself as the Morris 1000 of the micros. According to Amstrad, the one millionth machine was sold sometime this month; it may even be true. But it's hardly state-of-the-art either. It uses the now superseded three-inch discs and its Z80 processor is ten years old, laughably outdated and slow compared to the new 16-bit Ataris and Amigas and the 32-bit Archimedes. That's what makes it the price it is – and them the price they are.

But if it does the job, what's the point of the extra speed? Most of the time your PCW is doing nothing – even touch typists can only hit a few hundred keys a minute, meaning your machine's twiddling its thumbs 99% of the time. That extra few milliseconds wouldn't make any [illegible]. But if you want it to do something requiring a few more calculations per second – play an arcade game, say – the Archimedes will do it rather faster. But how many PCW users do you know who don't word process most of the time?

Just like car drivers, micro owners like to upgrade, buy newer and faster models, and reminisce about the clanky old machines they had years ago. And, no doubt, a lot of hitherto computer-illiterate PCW users will surprise themselves by moving up the silicon ladder to more glamorous machines, and talk at length about how their old 8256 used to take nearly five seconds to make an ASCII file of that document which took them four hours to type in when their new transputer does it in three and a half nanoseconds. But in ten years' time the vast majority of current PCW users will still be there, happily using LocoScript 5 and their Amstrad laser printer, still turning out perfectly good letters, business documents and manuscripts.

So, next time you pass your local computer store and read the blurb for the machines of the future with their four-figure price tags, smile and think how much your PCW cost.

Rob

When the music stops

Great things have been afoot here in Bath. Erstwhile editor Ben Taylor has forsaken the PCW and moved up onto 16 bit machines. (The PCW is an 8 bit machine. If you're wondering what the difference is, it's just that the 16 bit models crash twice as often). He'll now be editing our top secret new magazine *ST/Amiga format*. Atari and Amiga devotees can look forward to seeing all 8000's old jokes reappearing there.

Stepping into his shoes and taking over the editor's chair here is Rob Ainsley, while 8000's new boy is Sharon Bradley who, having just flown in from Dallas in a leopard-skin bikini, reaches the summit of her career in working alongside such an esteemed personage as Alec Rae. Alec manages to avoid being Technical Editor yet again.

Bring on the sub

As the number of our subscribers continues to swell we've had to take on outside help in the mailing of our subscription copies (the PO don't do bulk mailings, and it was a bit much to expect Carrie-Anne in Somerton to post off several thousand magazines every month).

So, as from now, all subscription mailings (and therefore all complaints and enquiries) are being handled by:

Paul Edwards
Avon Direct Mailing
Unit 12 Old Mill Road
Portishead
Bristol
BS20 9ES

8000 PLUS

The sizzling July edition of 8000 Plus will be in the shops on 23 June. Stay cool, reserve your copy now!

Hard Disc competition

After a great deal of unravelling our judges decided on the correct solutions to the Hard Disc competition in the March issue. The correct answers to the spaghetti-like tangle of data disc to programs was deemed to be: 1- word processor; 2 – accounts; 3 – database; 4 – graphics; 5- spreadsheet. The number of entries was the highest we've ever had for a competition – well over a thousand. The two lucky winners picked at random were:
20k Hard Disc: Dale Mellis, Richmond, Surrey;
10k Hard Disc: Gordon Ball, London.

Your hard discs will be with you just as soon as we've reformatted them. Our thanks to ASD peripherals for supplying the prizes.

NewStar Software presents....

THE CATALOGUE

Software for PCWs and PCs

It's all in the latest NewStar Software Catalogue, complete with introductions and explanations to the various subject headings. Information to help you choose, presented in one complete catalogue.

There isn't room in a single advert to show you the comparative merits of the various databases, accounts packages, wordprocessors, communications software or spreadsheets.

But there certainly is in 48 pages!

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Small Business Accounts

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NEWS

What'n Offer

If you've missed Amstrad's typewriter trade in promotion on the 9512 don't despair. Kador have introduced a special offer of a free 'Peace'n Quiet' Acoustic Box/Printer Stand free with every PCW 9512 sold.

The box, which normally costs £38.95, holds the PCW's rather noisy daisy wheel printer and reduces the noise level considerably. Kador suggest that the atmosphere of peace and tranquility that this will create in your work place will produce savings "both mentally and financially".

Just in case you're not convinced the company are also offering a £3 voucher for Kador products for every £50 spent on an Amstrad computer and/or printer bought from the company. For further details phone 0443 740281.

Address Mark Search Party

Ever wondered where all those address marks go – the ones that always seem to be going missing. Disc Recovery Service of 81 St Leonards Road, Bradford BD8 9QE are offering a free service to 8000 Plus readers to look for them – or in layman's terms to try to recover data from damaged discs.

All they require is a formatted disc for every damaged one you send and, of course, a stamped addressed envelope. They suggest allowing 10 days for your repaired disc to return. Well you certainly don't have much to lose.

David Smith, an old friend of 8000 Plus, who repairs discs in return for a small contribution to charity is also available again to take damaged discs. Anyone interested should read his letter in Post Script.

Looking for Adventure

You can bring a lot of adventure into your life if you take advantage of the latest offer from Topologika, who have just introduced a new deal for bulk sales of their adventure games. Instead of having to spend £9.95 on each of their first four games (Countdown to Doom, Kingdom of Hamil, Acheton and Philosopher's Quest) you can save up to £3 per disc. For instance if you buy all four discs you need only pay £6.95 each and for any three discs you pay £7.95 each. Buying two saves you £1 per disc.

The company have also cut the cost of 'Yes Chancellor' their simulation of British economics to £9.95 and they have released a follow up to Countdown to Doom, the new Return to Doom for £12.95. A third part of the trilogy is expected later this year. For details phone 0733 244682.

Jumbo Packs His Trunk

Just as soon as we carried the review of the Jumbo BASIC programming aid, CNS Services who produce it decided to move. Jumbo is the disc full of descriptions of each Mallard BASIC command and the syntax, ideal for all absent minded programmers. Anyone looking for the company should try 0736 752061.

RAM leap

How does a good idea by Ronald Reagan (president of the United States of America) put up the cost of a PCW 8256 by £50? Well it appears that US federal action is being blamed for the rise in the price of D-RAMS (dynamic ram chips) which, in turn, has led to a price increase in the basic single drive machine.

In a bid to reduce their budget deficit the Americans set up trade restricting on Japanese chips. So the Japs cut production and then waited for the price to rise as the shortages appeared. Now the 256k RAM chips cost $3.75 each instead of $1.50.

So now the Americans are paying the same money for a smaller number of chips and PCW users are having to cough out another £50 up to £349 + VAT for the basic model.

The end of April, in effect, also saw a price rise in the new 9512 at the end of a nationally advertised promotion that had sent people scrambling into cupboards looking for redundant type-writers. Now you will have to pay £499 + VAT for a 9512 even if you have an old Royal to trade in.

This brings it up to date with the 8512 which has already risen £50 (as reported in our April edition) and most of the Amstrad PC range. Amstrad are confident that the price rises will not affect their market according to the press release announcing the price hike.

Amstrad's sales manager Keith Collins said "The D RAM situation is affecting all computer suppliers and we will see a number of price increases in the coming months. In order to maintain our high level of advertising we must maintain our margins. Our Spring sales offensive, amounting to some £8 million is in full flood and I believe that the price increases will have little or no impact on end user demand."

Not that the 8512 price increase has made much difference to the sales of that particular model. Since some time before the 9512 was launched there have been shortages of the machine until now even if you were willing to pay twice the asking price of £449 + VAT you would have difficulty laying hands on one.

Wheel in the dealers

Amstrad have launched a programme of software dealer training courses aimed at the company's 2500 strong dealer base. Dealer's employees will be flocking from all round the country to the company HQ at Brentwood for the day long courses. During this action packed day the delegates will be brought "the latest selling techniques" according to the company blurb.

There is an entry fee of £50 on registration but on completion of the course each delegate gets a £50 voucher redeemable against Amstrad business titles.

Amstrad's software and peripherals development manager Peter Roback, who will be responsible for courses said "Although recognised in a recent survey as the UK's leading software publisher by volume of units sold we feel we can increase our sales still further by increasing awareness of our products and actively helping our dealers to sell more efficiently."

The normal courses will concentrate on SuperCalc, Wordstar, InfoMaster and AccountsMaster although there is a special course on the MC2400 modem planned.

DTP aid

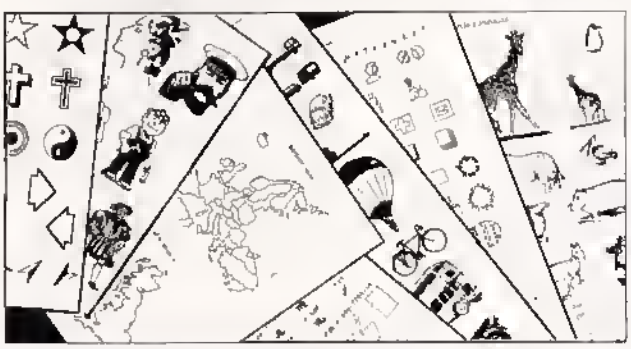
The desktop revolution goes on apace with three companies launching products this month to make life easier for desktop publisher program users.

Wadd Soft of Lytham St Annes (0253 721303) have launch Headlines a disc costing £7.99 which includes 12 extra fonts and several pages of extra clip art for Database's 'The Desktop Publisher'. It also includes two sets of large letters for pasting in which, it is claimed, overcomes the problem of ragged edges that 'The Desktop Publisher fonts suffer from in the bigger sizes.

And at the same time 'Mr DTP' (that's the company name – not a mipsrint) of Lowestoft have just produced what they describe as the first three discs in the Mr DTP Graphic Library – full of useful clip art that can be used in 'The Desktop Publisher'.

There is a fair amount of general stuff although there are discs covering specific subjects like Sport, Transport and Animals (no llamas). You can buy one disc for £14.50, two for £13.50 each and all three at £12.50 each if you write to 32a Rumburgh Road, Lowestoft, Suffolk NR32 4JL.

And finally Dragonfly Designs of 58, the Shrublands, Horsford, Norfolk NR10 3EL who specialise in fonts and borders for all the DTP packages is just about to launch a series of clip-art discs of useful images drawn by artist Michael Kay. The drawings, scanned from the artist's pen and ink drawings, are an attempt to provide good quality illustrations rather than the cartoon type clip-art provided with most DTP packages. The discs will cost £7.45 each.



Yuppie Love

Daatatax, Kempston Data's personal organiser program has come up with the ultimate addition – you can now print out graphics in your Filofax (or compatible). Daatafax can take graphics from the Desktop Publisher or Masterscan and print them out in the correct format to fit your ring-binder pages.

Now the Yuppies' world is their oyster. They can carry maps everywhere in case they can't find their way home and they can scan their favourite cartoons from 8000 Plus and keep them for all time.

"IT'S COLIN'S – HE'S ALWAYS LEAVING HIS FILOFAX LYING AROUND..."

Carried across the Atlantic

Following Alan Sugar's lead Sir Clive Sinclair has taken a giant leap across the Atlantic with his Z88 portable computer. Sir Clive's company Cambridge Computers Ltd has signed a deal with US grocery wholesalers Diversified Foods Inc. The company are going to be even more diversified with the addition of a new subsidiary Sinclair Systems Inc which will sell the computer and peripherals in the States.

The initial order is for 13000 units, worth $7.1 million at retail prices. All manufacturing will still take place at the SCI UK plant in Scotland.

Ron Giguere, president of Diversified Foods Inc used his expert grasp of the American idiom when he stated "We are in the process of establishing 10 regional distribution centres and are utilising our experience in merchandising consumer electronics goods to market the product nationwide."

The Z88 weighs under two pounds and is the size of an A4 pad of paper. It comes with built-in wordprocessor, spreadsheet, database, diary and BBC BASIC. It can be linked to a PCW (through an RS232) to download and print files.

PCW Aspirin

If you think that getting to grips with your PCW is enough of a headache SBS have come up with an answer to one of the other causes of sore heads amongst users – screen glare and artifical light reflections.

The latest product on the SBS list is a new screen filter countoured to fit the PCW's casing and attached by self-adhesive Velcro strips. This can be removed to allow cleaning of the casing, screen and the filter.

The filter is made of LEXAN Acrylic – which the makers claim has the advantage that it does not distort characters. It can be cleaned using standard VDU cleaning products. And all this for only £14.95. For details phone 0273 726331.

And if you're eyes are still tired and strained and you're desperately keen to type in this month's 8000 Plus listings why not invest £4.75 in a Line Reader from Philpar Ltd of Minehead (tel 0643 6891).

This strip of transparent plastic magnifies any text under it. So you just lay it on the line of the listing that you are typing in and it takes on much more imposing proportions. It also helps greatly in keeping track of where you are on a listing – very handy now we are publishing longer more complicated programs.

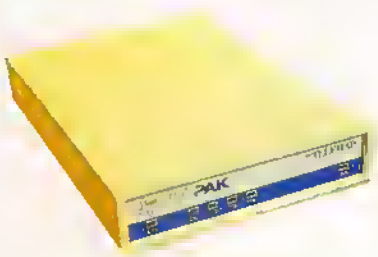
CAN YOU ACCESS ALL THESE SERVICES ON YOUR MICRO...?

BT APPROVED for connection to telecommunication systems specified in the instructions for use subject to the conditions set out in them.

Approval No. [illegible]/J/50r028

...WITH MICRONET AND PROPAK YOU CAN!

PROPAK – The complete communications solution from Telemap Includes ... The Propak Modem ... And a year's Subscription to Micronet. Europe's largest On-line Microcomputing Service:



The Telemap modem is manufactured to the highest standards by PACE Micro Technology

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- V21/V23 (300/300, 1200/75 baud)
- Hayes Compatible
- Powerful Communications Software
- RS232 Connecting Leads/Interfaces*
- User Guide
- 12 Months Warranty
- Supports: Atari ST, Commodore 64/128 and Amiga, BBC Micro, Amstrad PCW/CPC and IBM PCs/Amstrad PPC

Micronet:

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- Access to Prestel and Telecom Gold
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*The PCW requires an interface, please add £50 inc. VAT if you need it.

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FRINGE BENEFITS

Sharon Bradley gives you a quick guided tour of PCW add-ons

Every other advert in Amstrad magazines seems to be for one more 'indispensible' add-on – PCW cabinets, paper aligners, things which stop your keyboard spreading contagious diseases... hundreds of products to save time, save space or protect your machine. But which are a genuine benefit, and which merely jump aboard the Amstrad bandwagon? These are some of the things we think you might actually find useful...

Judging by the 8000 mailbag, the items of hardware causing most interest are screen filters. VDU (Visual Display Unit) tilfers (or rather the lack of them) have been stirring up more than their tair share of controversy in the press recently. Alarmists would have us believe that by sitting in front of a VDU for hours on end we were exposing ourselves to harmful infrared and ultraviolet rays. The incipient panic was detiated by the Institute of Ophthalmology in London who stated that we were all exposed to more intrared in everyday life – waiting at a bus stop, say – than by sitting in front of our PCWs. Health problems that occur are caused not by the VDU itself but by the various conditions in which they're used. That annoying tlicker that we've all experienced at some stage or another is one of the major causes ot operator headache, for example (along with typing ERA *.* instead of ERA *.BAK).

What screen filters are really good at doing is combatting the effects of sunlight: they eliminate glare, heighten the contrast on the screen and improve readability. Instead of a murky, squinf-inducing lime-on-grey, you get a better green-on-black contrast.

The simplest type ot tilter (VDU Technology's model at £14.50) is a screen-shaped piece of grey plastic which sticks directly on to the glass face, though it tends to require the help ot sticky tape after a while. Alfa Electronics' filter is a square ot mesh (which DIY enthusiasts swear can be imitated by stretching a piece of chiffon over the screen) titted onto a plastic frame which sticks on to the body of the monitor. VDU's tilter produces clearer contrast, but the Alfa filter (at £17.95) cuts down on reflection better.

If money is no object fhen the Accodata filter might be worth looking at. Though it's expensive – £64.50 to £74.50 plus VAT – it gives you lots ot features to show your friends, such as a roller blind filter, a metallised mesh to block emission and an earthing cable to reduce static.

For those worried by static, the Static Buster claims to provide an efficient static control system tor the PCW and its user. For £44.95, it will send static charge trom the keyboard and terminal and send it to earth, though why this should be a good thing is questionable.

Copy catalogue

There are a number of devices to hold up documents for copy typists lo read from. The Thingi (as it has memorably been named) is a simple plastic ruler-resembling device which attaches to the top ot your PCW with Velcro, and sticks out horizontally from the side. It has a small clip into which you attach the texf that you need which you can then easily refer to at a glance. It seems able to hold up reasonably heavy items – say a

1 Alfa's margin maker and screen filter

2 The stick-on VDU filter from Visual Display Technology.

3 Re-usable disc drive cleaning kit from SBS.

4 Crown's carrying case for the 9512

5 Kador's range of add-ons for the PCW.

6 The Com-Stax workstation

7 BBDs PCW dust covers.

copy of 8000 Plus open at the Tipoffs page. £9.95 is a lot for what is effectively a strip of plastic, but you quickly find you can't do without it. There are right- and left-hand sided models.Kador, popular accessory manufacturers, have even gone so far as to produce The Dexette – which for £6.00 combines three operations in one product: copy-holder, clip-board and write-wipe board. It performs fairly adequately; the only problem is, the heavier the text you clip into it, the more unstable it quickly becomes. Despite its write-wipe facility it's unlikely you'd use it to write your shopping list on; it suffers a bit from trying to do everything.

More sophisticated 'anglepoise' copy holders for around twenty pounds can also be found in the large mail-order ads. They're certainly a lot sturdier but the price makes them best suited to professional heavy duty work.

Key coverage

For those PCW addicts out there who quite frequently find themselves sitting bleary-eyed in front of their green screens in the early hours of the morning sustained only by a seemingly endless stream of black coffee, or for those of us who are just plain clumsy, Kador also do 'Seal'n'Type'. It is a transparent, re-usable spillcover which fits, like a film, over the keyboard. In laboratory conditions it protected the keyboard against every drink available from the Future Publishing coffee machine. It didn't affect normal use of the keys either. Again you have to decide whether £10.15 is a worthwhile investment (enthusiasts claim cling film can be used instead).

Richman Software's Menu-Mate is a plastic cover which fits over the keyboard and offers you a foolproof system of reminder templates. Operational commands and instructions are there at a glance, reminding you to save the work you're currently busy with, for example. It also provides simple instruction on some of the more commonly used LocoScript (1 and 2) procedures. At £6.99, it's probably a useful add-on for your PCW, especially if you're a LocoScript 2 devotee who has as yet failed to penetrate its darker mysteries.

The problem of how to keep your discs organised is a common one. The Plonker Box (honestly!), again from Kador at £4.99, is a small box which sticks on to the side of the PCW and holds your everyday discs. If you use a large amount of discs, the AMS disc storage box for £12.95 seems good value. It's lockable (so instead of just stealing one disc, they'll have to steal all your discs) and holds up to 21 discs in individual partitions. If you hunt around your high street shops, you may find a cheap card index box which will do as a disc holder.

Printer add-ons

The printers supplied with the PCW are extremely good budget models. The only complaint most people have is that precise paper alignment is difficult; if you want to print out for your personal organiser with the text right up against the left hand edge of your paper, or print in two columns by feeding the sheet in a second time, you have only guesswork to rely on.

Paper guides are accessories which clip onto the printer and feed in the paper (funnily enough) in such a way as to precisely align the margin. Feed'n'print, from Kador, has sliding markers and scales in pitches 10 and 12, so as well as being instantly adjustable to whatever paper you happen to be using, it will also centre A4. Kador have recently produced a paper feeder suitable for the PCW 9512 daisy wheelprinter, priced at £9.85 inclusive of VAT.

Suppliers of the MM3 take great pride in pointing out that this margin maker has been designed exclusively for the Amstrad PCW range and that it has not been imported from another model. Like the paper feeders it will probably save you wasting reams of expensive letter-headed paper because of wonky margins. The MM3 successfully corrected any tendency of the paper to slide (especially continuous stationery) by means of two arms which also accurately replace it if it needs to be reinserted. Again, at £12.50 it would probably be a good investment for businesses though PCW hobbyists wouldn't use it so much.

There is, as yet, no sheet feeder for the PCWs. If you're doing a mail merge run on letterheaded company paper, you have no option but to feed in the sheets manually. Surely there's a market there to be exploited by someone?

All Clear Ahead!

To ensure optimum quality printout, it's usually a good idea to give your printer a periodic overhaul. It's not quite as drastic as it sounds, though. All you have to do is get rid of the ordinary office pollution (like dust and cigarette smoke) and residual ink which clogs up the printer heads, and this can be done through a number of printer cleansing products now available. Cleanprint, at £14.95, looks just like an ordinary printer ribbon except that the inked ribbon has been replaced by an impregnated cleaning fabric which lubricates the printhead and lifts off the grime. A good investment for anyone who wants to keep their printer in tip-top condition.

SBS have developed Cleanprint (£9.95) especially for the Amstrad range and is the first re-usable 3" disc drive head cleaning kit available. It comprises a cleaning cloth disc and specially formulated cleansing solution. Once inserted into the disc drive it will pick up all the harmful oxide particles deposited by the disc and in the long term protect your data and prolong the life of the disc drive.

Of course, a good way of minimising the amount of grime to which your machine is subjected is by investing in some dust covers. Usually low-costing and very durable, they'll halt any deterioration to the hardware simply by covering it over when you're not using it. The manufacturers design them to accomodate the monitor, keyboard and printer and sell them in packs of three for around £12.00. They'll prove as beneficial to the PCW home enthusiast as to the professional user.

Furniture music

There's been a flurry of activity recently in the computer furniture manufacturing business. Designed predominantly to save space, the Com-Stax "workstation" (formerly known as Am-Stax) can accommodate all the machines in the Amstrad 8000 range. Again, the printer is positioned on top of the monitor whilst the keyboard is set at a 30° tilt to make those long hours spent sitting in front of the screen that little bit more comfortable. Com-Stax will be a boon for the home-user as it takes up approximately one quarter of a square metre of floor space. It doesn't have any flat desk space, so you'll need somewhere to put your discs, paper, coffee, biscuits etc. But at £29.95 as a flat ready-to-assemble kit it does represent remarkable value, and looks very stylish too.

Elmo UK Ltd can offer a much larger model with more sophisticated features – pull-out files, shelves, a worktop etc. – called DataDesk. Although it wasn't designed exclusively for the PCW, at £120.00 inclusive of VAT it's probably still a very good buy, especially when you bear in mind the exorbitant prices of standard office furniture these days.

Racket protection

The 9512 daisy-wheel printer has long been renowned for the racket it makes and its ability to halt all telephone conversations within a ten-mile radius. In an enclosed working environment, this is guaranteed to drive you berserk, especially if you're feeding it continuous stationary. Various suppliers have come up with a compact, lightweight acoustic hood which dramatically reduces the noise level to the extent that you can easily carry out even a very intelligent conversation next to it and continuous print-runs are no longer quite so nerve-fraying.

Amgard do a hood for 8000 printers at £89.95, while Kareware's model costs around the same.

Colouring up

If you're bored of ordinary black and white printout, and would like to bring some life into your reports (especially useful for presentation documents) colour printing sounds fun. SBS Computer Supplies have a range of nylon colour ribbons for the Amstrad 8000 series and the 9512. They are available for £4.25 each in 5 colours: red, green, purple, brown and orange and are fairly easily inserted – as soon as you want a change of colour – by arresting the printing procedure. In a LocoScript document, for example, you'd press [PTR] and then [EXIT] to resume – so unless you have a good sense of timing, it might be tricky to pick out individual words in a different colour!

The same company also supplies reusable nylon ribbons for the PCW 9512 which will shortly be supplanting their carbon counterparts and prolonging ribbon life by 4 or 5 times.

Portable PCWs

Until someone comes up with a genuinely portable LocoScript machine, we'll have to make do with lugging the PCW around. Crown Computer Products have a range of transportation cases, each case being specifically designed for the machine that it will hold, for around twenty pounds. They're not particularly cheap, however, but the suppliers are eager to stress their durability and their protective properties.

Often the simplest things are the most useful. Different people swear by different products, but most people will find a screen filter, a copy holder and possibly a printer hood worth the money. Careless coffee drinkers would do well to get a keyboard cover too. The paper aligners will be very useful to anyone writing business letters.

All these bits of hardware may not do things quite as exciting as your desktop publishing program or your adventure game, but they're all handy things to have, and are guaranteed to be free of bugs! exit

Directory

This list is by no means comprehensive, but it will give you an idea of where to start. Most accessory suppliers advertise quite extensively in PCW publications. All prices include VAT unless stated.

Screen Filters

Visual Display Technology (01 368 9555/0666) £14.50

Accodeta (0732 885555) £64.50 to £74.50

Alfa Electronics Ltd (01 390 2588) £17.95 to £19.95

Amgard – Computing Plus (0993 881912) £59.95

Paper aligners

Mergin Meker (0784 52677) £12.50

Kador (0685 87051/883663 Ext 217) £7.50

Alfa Electronic (01 390 2588) £7.50

Keyboard spillcovers

Kador £10.15

Disc Storage Holders

Plonker Box: £4.99 CF2 Pop-up Disc Storage Holder: £5.50 CF2 Lockable Disc Storage Holder: £10.95 (all from Kador)

Orion (01 852 3694) Sentry Supreme Model 5720 Media Fire File (fireproof disc box) £299.00

SBS Computer Supplies (01 434 0153) £10.95

Maintenance Kits

SBS Computer Supplies Ltd (01 434 0153) From £14.74

3" Disc Drive Head Cleening Kits (Re-useable) Available from SBS Computer Supplies Ltd Price: £9.95

Copyholders

Dexette – Kador £6.00

RSC Ltd (0923 243301/241921) £16.00.

Thingi – Little Office Computer Products (051 666 1190) £6.95

KCS (01 993 7855) £19.50

Colour Ribbons

SBS Computer Supplies From £4.84 excl. VAT

RSC Ltd £6.00

Acoustic Hoods

Kareware (01 833 2458)

RSC Ltd at £175.00

Acoustic box/printer stand – Kedor £38.00

Computing Plus Price: £89.00

Workdesks

Elmo UK Ltd (01 836 6913) Price: £120.00

SBS Computer Supplies Price: £187.00 excl. VAT

Computing Plus Workstation with inbuilt printer at £99.95 Incl

Crompton Computer Furniture (0908 311544) The Compact Workstation from £119.00

Com-Stex (01 373 4979) £29.95

Dust Covers

BBD Covers (0257 422968) From £11.95

Transportation Cases

Crown Computer Products (0704 895815) Printer case: £10.40 excl. VAT PCW 8256/8512 case: £17.50 excl. VAT

NOTES IN THE DARK?
Light them up with CHIBASE!

CHIBASE is specially designed and written for the PCW by Chiasma Software

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- A single key command causes the edited text to be stored as a record on the database. The keywords will be stored in an index. The software uses the index to find records.
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Some features of Chibase

- **Fast** and **easy** to use. No complicated syntax to learn.
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- **Keywords** up to 15 characters. Up to 50 keywords per record.
- **An index** of keywords is automatically maintained by the software. You can view or print the index.
- **Form** facility, if required, helps you to position text within the records. Move between parts of the form by pressing the TAB key.
- **Export/Import** facility enables you to move English text in or from your word processor.
- **Amend Delete** facilities.
- **Sort** facility. (Needs 512K RAM).
- **High capacity** achieved by automatic text compression and true variable length records.
- Comprehensive indexed Manual with numerous illustrations.

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"8000 Plus" March 1988

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FACT: 101 prooled forecasts to the racing press has resulted in £930 clear profit to a £10 stake.

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'Very professional. The best product around for a small business. And that's praise indeed.'
Amstrad PCW Magazine

D1007

new SUPERTYPE II £24.95

Now Locoscript 2 compatible -- Perhaps the only reasonable criticism of the Amstrad PCW might be the standard of the printer. Supertype II is a program which will offer you EIGHT new, radically different typestyles. Each of them has its own distinctive, professional appeal, giving your documents an original facelift!

Supertype II is unique in that it works directly with LocoScript and all of your GP/M software. It supports all of the printer 'high quality' modes including: enlarged, bold, emphasized, italic, etc.

'a valuable addition to the PCW's talents ... very simple to use ... learnt in 15 minutes'
8000 Plus

D1003

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Are you sure your taxman is doing his job correctly? Fully menu-driven, this UK income tax computation program will calculate your income tax liability for a given tax year (84/85, 85/86, 86/87, 87/88) and provide the pertinent facts about your tax position. Information, which can be easily saved and amended, can be used to provide useful 'what if' calculations on your tax liability. Guidance notes are provided for users unfamiliar with the operation of the UK tax system and a software update service is available for changes in legislation. This program is also ideal for practising Chartered Accountants, since any number of different clients may be processed on a single Amstrad PCW.

'an excellent program ... I can unhesitatingly recommend PTP'
Computing with the Amstrad PCW

D1006

DATASTORE II £39.95

Looking for fast access to stored data? Want to create customised reports, mailing lists for printing labels, office and personal records with NO technical knowledge?
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Amstrad PCW Magazine

D1001

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QUICKIES!

Extra fonts for Stop Press owners and a clock attachment for your PCW

COMPLEMENT FONTS & BORDERS

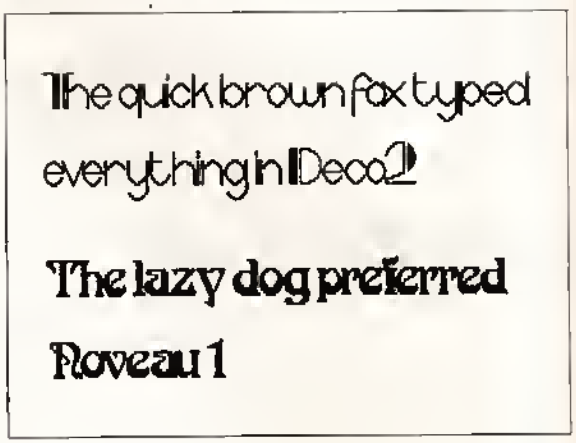
£12.50 ● Dragonfly Designs (58 The Shrublands, Horsford, Norwich, NR10 3EL) ● 8000s only

When the PCW came out at first everyone was thrilled with being able to print in italic. Now that people are used to fancy DTP fonts the craving for new and more striking fonts becomes compulsive. And acting as 'pushers' Dragonfly Designs have come up with new fonts and borders for all the main DTP packages.

Of course the Complement discs do nothing that you couldn't do yourself – if you had the time and the flair. Most of the DTP packages provide the ability to design your own fonts. But, as anyone who has tried to design their own font knows, it is a very time-consuming and often totally frustrating exercise. Even some the fonts that are provided with DTP packages showing glaring inconsistencies that send you leaping for the font editor. It's a pleasant relief to find something that does provide you with good, consistent, easy to read fonts with a touch of flair.

The latest Complement disc, designed to work with Stop Press marketed by AMX, is one of the best. Because Stop Press has its fonts designed on a full 32x32 grid the new Complements fonts can be simply loaded and used as normal. This is an advantage over the DTP packages that have 16 by 16 grids (Fleet Street and Desk Top) as the characters have then to be cut and pasted as graphics – a far slower and more laborious task.

There are 11 fonts on this disc. Apart from the Rune font, for Tolkien fans, and a particularly modern 'Techno' font the characters are all eminently readable and a touch more artistic than the standard character sets. They are mainly based on Art Deco and Art Noveau styles which translate very attractively on to the screen. As always the printed output isn't so good but they are still above average.



The other main constituent are the pieces needed to make up fancy borders round your picture. You can build up corner and side units to frame your text in a variety of impressive Celtic and Art Deco styles.

Setting these up is not the easiest of jobs even with the solid positioning of Stop Press. However the finished product does look impressive right down to the twin rose design you can use to fill the bottom of the page. Another advantage of the Stop Press version is that the DTP package has the ability to reverse and rotate the elements meaning that you can re-use the one corner unit for the whole border.

RANGE OF FEATURES	■■■■■	PERFORMANCE	■■■■■
EASE OF USE	■■■■■	DOCUMENTATION	■■■■■
8000 PLUS VALUE VERDICT	■■■■■		

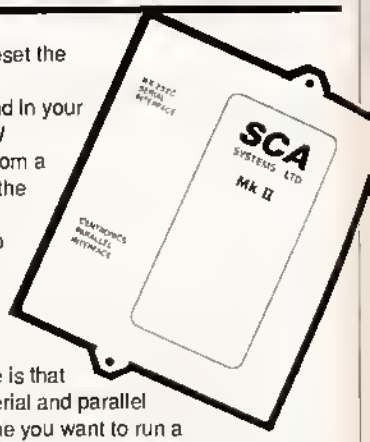
REAL TIME CLOCK

£59.95 ● SCA Systems Ltd (0903 700288) ● All PCW's

As anyone who's worked into the small hours could tell you, it would be nice to have a clock on the PCW which shows the real time. But as Amstrad didn't see fit to install one on the PCW, would it be nice enough to warrant the investment of £30 or £40?

But if you need an RS232 interface (the box that fits on the expansion port to connect to another printer, modem or another computer) and it happens to have a real time clock in it, suddenly it sounds more interesting. And when you hear that this costs only £59.95 hardly more than the normal RS232 it becomes quite fascinating.

The PCW has an internal clock which you can use for various timing processes. The problem is that every time you switch on the compufer assumes that it is the first seconds of the 15th December 1982 – the moment that time was invented according to the PCW.



Of course you can reset the time, but with an SCA interface and a command in your PROFILE.SUB the PCW reads the correct time from a battery-backed clock in the Interface. It isn't totally accurate as it can't keep track of seconds so you could be up to a minute out, but this shouldn't worry too many people.

The other advantage is that you also have the full serial and parallel interface there every time you want to run a printer or to hook up to a modem or another computer. The interface can handle baud rates of 75, 110, 300, 600, 1200, 1800, 2400, 4800, 9600 or 19200.

To make best use you should have if fitted constantly but this is quite sensible if for no other reason than to avoid damage to the delicate edge connector. However it doesn't have any 'piggy-backing' extension so that could cause problems if, say, you wanted to use a mouse.

It comes with a demonstration disc and a printed manual which although not totally lucid does give you enough information to get to grips with the interface.

RANGE OF FEATURES	■■■■■	PERFORMANCE	■■■■■
EASE OF USE	■■■■■	DOCUMENTATION	■■■■■
8000 PLUS VALUE VERDICT	■■■■■		

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Why not join the Advantage Independent User Group (only £12 per year in the UK, £15 Europe, £18 World) and get £1 off every disc you buy – £2 off all compilers.

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HISOFT KNIFE PLUS Disc Sector/File Editor, Disc Recovery		£18.95
MINI OFFICE PROFESSIONAL WP Spreadsheet Database Comms Graphics		£27.95
DATABASE DESK TOP PUBLISHER Highly recommended package		£27.95
DATABASE DESKTOP PUBLISHER SOFTWARE AND MOUSE for the PCW		£74.95
KOSMOS French, German, Spanish, Italian Tutors on disc	EACH	£18.95
SCHOOL SOFTWARE Magic Maths, Maths Mania Better spelling Chemistry, Biology, Physics	EACH	£14.95
RS232 SERIAL & PARALLEL PRINTER INTERFACE ADAPTOR for the PCW		£49.95

The following discs contain the best software from the public domain tailored for Amstrad PCW computers running CP/M Plus. Fully documented by Advantgae. Each disc has MENU selection and a sorted directory.

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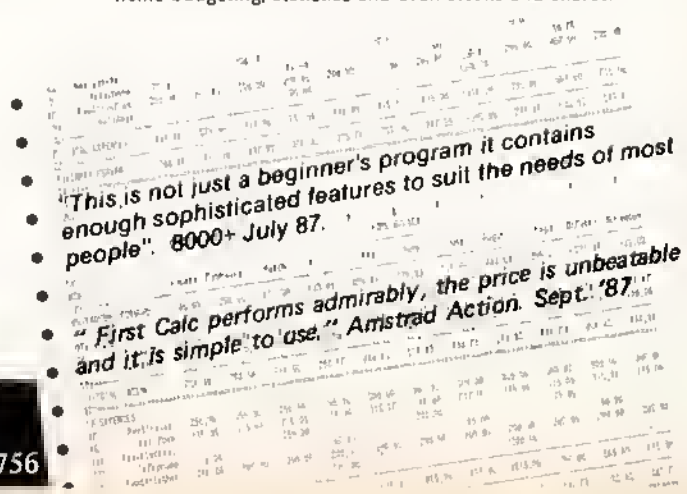

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CALLING THE SHOTS

Trouble with mail merging in Mini Office? Manual no help? Don't just have a shot in the dark: Rob Ainsley sheds some light in part 3 of our series....

Yes, fine, we all know there's a good database and a good word processor in Mini Office – but how can you use that database data in mail shots? After all, most databases are used for club or company records, where mail shots to members or customers are a large part of the job. Being able to link the two is one of the most powerful features of Mini Office: given a few minutes' work you can print out at a stroke letters for all those names and addresses stored in your database with the names, addresses and even other details of each person automatically put into their letter.

Suppose you've stored your book club customer database in a file called CLUB.DBS, containing each member's name and address somewhere. The key to mail shooting lies in a file called CLUB.MRG, which saves these details in a form the word processor can understand. You can then write a letter and leave slots of a fixed length to be filled in by an item from this 'merge' file. The word processor will churn out a letter for as many people as there were in your database, filling in the slots for each.

▲ The list of fields in the original database

Start Point

So, the first thing is to load up Mini Office as usual, select the database, and insert your data disc with the database file on. Load your file CLUB.DBS from the 'Load/Save' option in the main database menu. Then from the same menu take 'Save mail merge file' giving the name as CLUB.MRG.

▲ The first entry in that database

Pedant note

The word 'database' is used loosely to mean the program which manipulates your information, or the file on disc in which the information is stored, or just the information itself in a general sense. To confuse things further, the company which manufactures Mini Office is called Database Software.

(You can't change the .DBS or .MRG endings).

If you want to send letters to only a certain selection of those on the database – for example, just to customers who owe you money – you'll have to split them off to a separate database. Use 'Search and mark' as described last month to mark off all debtors which are saved ('Save marked records') to a file DEBTORS.DBS, and then make a mail merge file out of these.

Now replace your Mini Office disc and go into the word processor via the main menu. When it's loaded up you can re-insert your data disc.

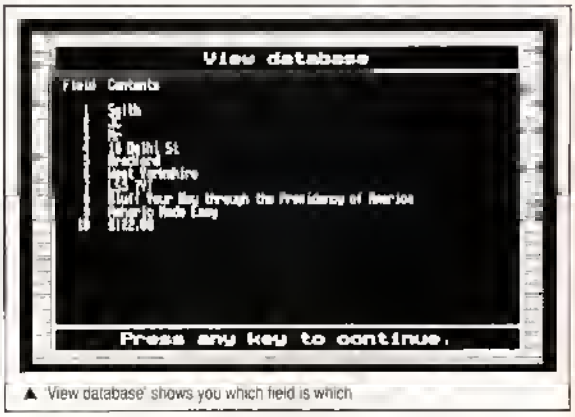
Select 'Database' from the main word processor menu. You have the options to 'load' or 'view database' or 'assign strings'. These are the three stages you go through before beginning your mail merge letter itself – first you load the mail merge file you just created into the memory of the PCW, then view it to check the right information is loaded up, then tell Mini Office how you want this information organised into your letter.

Select 'load database' and load the file CLUB.MRG (*not* CLUB.DBS or you'll get the worrying message 'failed to load record'). Back in the same menu select 'view' and you'll see the items in the first record of the database together with the number of each field. If there's something wrong you'll have to go back to the database and re-save the merge file.

Strings attached

Then from the same menu, take 'Assign strings'. This is a list in which you assign fields of the database to numbers – suppose you assign the 'surname' field to number 1. When you come to write your mail merge letter, every time the code 'D1' appears in the letter, the contents of the 'surname' field will be inserted. Similarly if you assign the 'first name' field to 2, then every occurrence of 'D2' in the letter will result in the contents of the first name field being substituted.

To assign the surname to number 1 as above, use the cursors to move down to '1' and press D to signify a field from the database. The next number you enter is the number of the field from the database, so you'd better have a list of which field is which somewhere! To avoid confusion it's probably easiest to make field number 1 from the database be assigned to number 1 in this list, though you don't have to. In the original database, surname was field



▲ 'View database' shows you which field is which

number 1, so the number you type is 1.

Next you define the length. The length is fixed – make it shorter than the longest surname and some surnames will get truncated so play safe. If you can remember the length you defined for the field in the original database set up that'll do nicely.

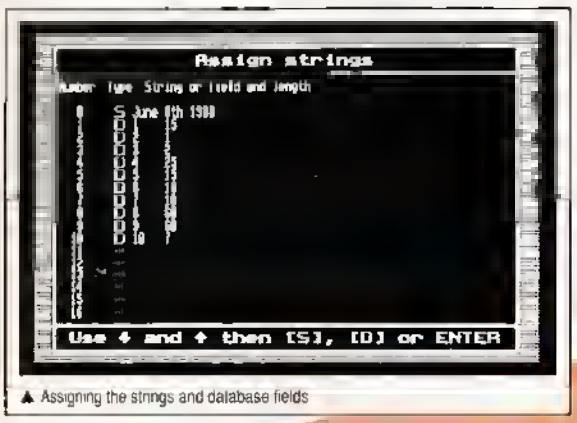
Carry on for all the fields you might want to put in the mail merge letter. Of course if you want to play extra safe you can just assign every field to the same number in the list.

Instead of printing a field from the database, you can tell the word processor to print a piece of text every time it sees one of those 'D' numbers in the mail merge letter. For example, you could assign today's date to the number 0, and then all your mail merge documents with 'D0' in the text would automatically print the correct date at the position of the 'D0'. Instead of manually editing all your various mail merge letters, you'd just assign today's date to the number 0 by pressing S instead of D above and the typing in the date.

Extra, extra

When the 'assign' list looks right, EXIT and start working on your mail merge document. All you need to remember is that pressing EXTRA-D followed by EXTRA-0 will put that 'D0' code mentioned above into the text, and similarly for the other numbers. It's distinguished from normal text by being printed in dim letters. Every dim 'D0' is a slot for the date, every dim 'D1' is a slot which will be filled by surnames from the database, and so on.

Suppose you've matched each field in the database already defined with the same number in the assign list, ie D1 is the surname (length 15 say), D2 the initials (length 1 say), D3 the title (suitably long) D4 to D7 the address, D8



▲ Assigning the strings and database fields

and D9 the books ordered, D10 the amount owing. Your mail merge letter would begin something like:

```
The Book Club
55 Bombay Rd
Beverley
East Yorkshire

D0

D2 D1
D4
D5
D6
D7

Dear D3 D1

As a valued member of our
book club, we're sure you'll
be interested in our new
summer catalogue...
```

Blankety blank

The space occupied by each slot for database items in a mail merge letter is fixed, and Mini Office isn't 'smart' enough to close up blanks. If you leave ten spaces for a first name then ten for a surname, the name 'J Smith' would come out as `J Smith` while 'Srinivasraghavan Venkataraghavan' would be truncated to `Srinivasra Venkatarag`. It follows that you can't try anything fancy, and it's best to keep slots by themselves on a line – as they would be for names and addresses at the head of a letter.

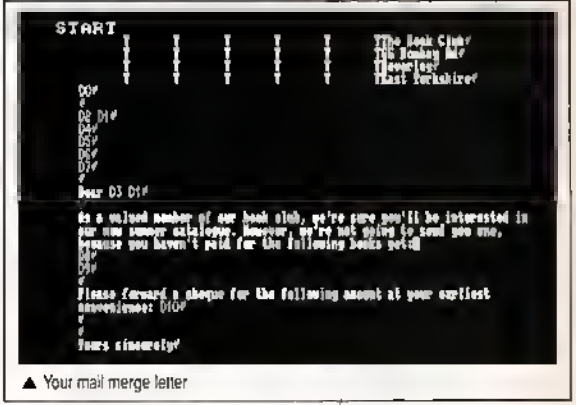
When you set up your database, you can avoid a lot of trouble by having a special field called 'title', say, which contains items like 'Dr Smith', 'Field Marshal Montgomery' etc., in addition your normal surname and initial fields.

There are no conditional facilities in Mini Office's word processor – you can't include commands to the effect 'only say we'll send the boys round if the customer owes us money' as you can in mail merge programs proper. The best you can do is to separate the debtors from the non-debtors back in the database and do mail shots for each, which may well be OK for many purposes.

While Mini Office is fine for simple mail merging, more sophisticated requirements such as the 'You, *Mr Taylor*, have been chosen out of all the people in *St Amiga Rd* to take part in our prize draw' type letter, or ones where the content may vary from person to person, will have to be done on a mail merger which closes up blanks such as LocoMail or Protext.

Remember that if you want to include some info in the middle of the letter – the list of books each person has ordered, perhaps – put them in a line by themselves:

```
...We have received
your order for the
following book(s):
D8
D9
and will be sending
them to you very
shortly.
```



▲ Your mail merge letter

Sometimes you might be able to get away with putting an item at the end of a line:

```
We note with some concern you still owe us D10
Please pay up, we wouldn't want anything to
happen to you
```

When you've finished your letter, you can see how it looks on the screen. EXIT back to the main word processor menu and take the 'Print' option, then select 'Preview' from the Print menu. You'll see a letter for each item of the database being written to the screen, and you can stop them flashing past your eyes by pressing, surprise surprise, STOP and any key to resume. If there's something wrong you can go back and adjust your main document until everything looks right.

To print the lot out, go to the 'print' menu as above but set up the document using the 'set up printer' option. You'll probably want 'number of copies' as 1. The rest of the options should be reasonably straightforward, though unless you have a recent copy of Mini Office, read the margin note!

When you do get it right, you can relax and let your PCW and printer do all the hard work churning out the letters.

EXIT

Never used the word processor?

The word processing module would need a whole tutorial series by itself to cover completely. If you're just doing a straightforward mail shot letter, you can probably get by on your wits and just the cursors, tabs, and delete keys. Loading and saving files is done by EXITing the word processor menu and going through 'Load/Save'.

Snug as a...

Yes, yes, we know! There are a number of reported bugs in early versions of the word processor. You can, say manufacturers Database Software, get a free upgrade by returning your bugged version to them with a covering letter. Database's number is 0625 878888.

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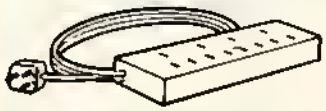

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HELP FOR BASIC PROGRAMMERS

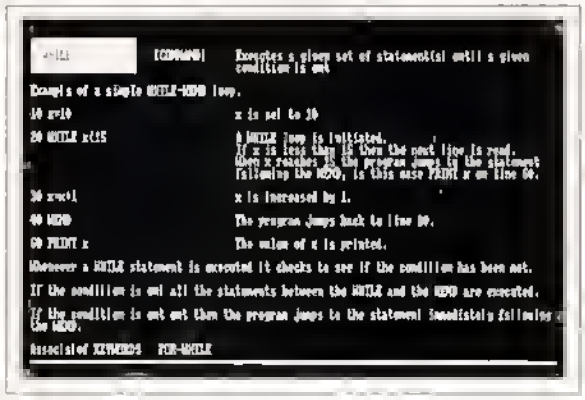
JUMBO

HELPMATE FOR ALL PCW OWNERS

Anyone who has dabbled wih Mallard BASIC will have come across the moment of truth when they just can't remember – what is the difference between SPACE$ and SPC, which number is which after MID$, or even, how do you switch on a switched-off cursor blob?? Maybe there is someone who can remember every command in Mallard but they certainly don't work for 8000 Plus.

Now, since the launch of the Jumbo disc you have two choices. 1) You can use the old method of spending 10 minutes looking for the BASIC method, another five minutes finding the right command other 15 minutes discovering you're still not totally sure of the syntax and a final 20 minutes working out how it works by trial and error. By which time of course you have probably forgotten what you wanted to do in the first place. Or

2) Use Jumbo and find out what the command does in minutes. Jumbo is simply a disc with nearly 200 files listing every command in BASIC including a few you haven't even heard of. The idea is that when you get stuck for the right command or syntax you just call up the directory (type d). This is in effect a list of file names.



If you want to find out what Fetchkey$ does you check the list and find that the file with the details on this command are kept in a file name FKEY (you just type in the capital letters from the name FetchKEY$ becomes FKEY). Then just write `type fkey` and the file appears.

It has all the Jetsam commands, a file listing all the escape codes for useful functions (everything from reversing the screen to defining a window) and a file with the full ASCII code and character set. There is also a page of keywords on various topics and a run-down on the bit-wise operators (AND, OR etc). The advantage is you call these up without affecting your working on the program.

The idea is basically so simple you feel as if you could do it yourself. There is no program or anything too clever – it is simply the basic (or BASIC) facts simply laid out with an example where suitable (by far the best way to understand them). A simple way to learn BASIC

As reviewed in 8000 Plus issue 20 May 1988

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COMMS TO US ALL

Alec Rae logs on to a new cut-price package from Microlink

MICROLINK
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The world of computer communications is an alluring one. Connect your PCW up to the telephone network with a modem, and you can instantly access stock market prices, airline travel information, business data and much more. 'Everything you need to go on-line' says the publicity material for Microlink's new communications pack. Is this the package budding comms freaks have been waiting for?

Few PCW owners have made the great step into the world of comms. It's a chicken and egg situation; until more people get into E-mail (electronic mail), is it worth the money and effort?

Perhaps part of the reason is the elitism that is so much a part of comms. Whether it is done on purpose or not, logging on to the average bulletin board can seem maliciously obscure and complicated to the novice. There probably is a reason why users should have to remember a code like 'A21920100472' but, as it is never fully explained, it does seem a little like bloody-mindedness.

The expert, steeped in 'baud rates' and 'protocols' can easily take in the sophistication of the new Microlink multi-speed modem. But there is definitely a need for some modem supplier to take the hand of nervous comms-illiterate beginners and lead them through the terrors of those early days.

All you need is cash

Microlink's package has everything the beginner needs. The basic ingredient is a multi-speed auto answer/auto dial, fully Hayes compatible modem – probably better known to the comms world as the Pace Linnet. But you also get the software you need and the cables to link it to an RS232 interface, which can be supplied for only £39 if you require it. You even get a free month's subscription to Microlink's bulletin board – an ideal way to see what use you would make of it. For the existing comms enthusiast, already set up with this equipment and subscriptions, this would be a waste.

The software, a cut down version of Mini Office Professional with just the comms program and the word-processor, is certainly one of the easiest to get to grips with. Fully menu driven, it is reasonably easy to work out what most of the commands do by trial and error – just as well given the notoriously unhelpful manual.

There are neat features like the key definition files which allow all these long complicated codes for Microlink or Prestel to be saved on a file. Load that before you start, press the right-f-key and out comes the correct stream of figures and letters. Sadly the documentation is again unhelpful. While it was easy to save a key definition file to disc it seemed impossible to find it again unless you called it 'SETUP.KEY'. One called 'PRESTEL.KEY' just doesn't seem to show up on screen in the 'Load File' section although you can still load it if you can remember the name.

Like most good software packages there is a section that allows you to configure your RS232 to the correct baud rates, parity, stop bits and all those other things you don't understand. But better still there are six preset options for Microlink or Prestel which you can choose in seconds.

Absolute beginners

The main problem for a beginner using Mini Office is that there is just not enough information in the documentation for the beginner to feel totally confident. For instance in the section on buffers it is fine to know that the Buffer Control "will allow you to make far better use of your communications link in Dumb TTY and VT52 modes (not Viewdata)" but unless you are told exactly how you do it, you could come away feeling strangely unsatisfied.

Save on a packet

Time is money. The longer you take to do anything the bigger the telephone bill or the connection fee to a bulletin board. One way to offset the charges is to log on to PSS (Packet SwitchStream, a British Telecom service). These services allow you to patch into a bulletin board like Microlink for a small fee. The advantage is that they have local telephone numbers all over the country so you are only paying local rates. It certainly is more economic if you are going to be on line for a while.

Bulletin proof

Bulletin boards have basically two uses. Businessmen can make use of the 'gateways' – a way of accessing all kinds of information, share prices, company news, and press agency reports. They can make good use of the E-mail facilities, an ability to quickly exchange messages with anybody who has a Microlink mail-box (ie. is a member) or send a telex. They can book hotel rooms, check train timetables, book train tickets and even get legal advice.

Enthusiasts generally use it as a club. They can read messages left on notice boards (parts of the system given over to a specific subject), reply to questions or leave their own queries on the notice board.

▲ A typical screen from Microlink

The same kind of problem carries on to the documentation for the modem itself. Very commendably it starts at the beginning and works its way logically through the process. But being all things to all men (ie. trying to cover use with any software) there is little to tie it in specifically with Mini Office.

One positive advantage is the auto-dialling. With less sophisticated versions you need a telephone handset to fit into the machine to hand dial a number. With this modem you can type the number in to your computer on screen and the modem automatically dials it and originates the call (a fancy way of saying it starts talking to the other modem). Better still, the micro-processor in the modem allows you to save up to 32 numbers – with a brief description to jog your memory. Simply by typing a reference number the full telephone number is dialled.

Used in conjunction with the key definition files in Mini Office you have by far the easiest way to log on to a bulletin board. It is not quite so bad if, for instance, you log on to Microlink direct, but if you go through PSS (Packet SwitchStream – see the margin note) you have to enter long streams of figures in the right order at the right time. Just put the phone number (with the correct command to get the computer to dial it) and each code on a different f-key and you can be through without taxing your brain cells in the slightest.

The other major sophistication is the automatic answering – the ability to leave the modem running to answer any phone call that comes in and receive a message from another computer. Comms is a twilight world; enthusiasts stay up into the middle of the night to make use of the services at cheap telephone rates. With this feature you can happily leave the modem set, go to bed and then examine to messages the next day, refreshed and relaxed.

But again this is marred by the sparseness of information in the manual. It is a powerful feature that definitely needs more explanation than is given. The manual gives all the information that the expert needs to get the most from the package so why isn't the beginner given the same help? It also doesn't help that all the information is spread over so many different manuals. You have to collate information from the Mini Office and modem manual and a booklet from Microlink.

Setting the Pace

The package described here is the upmarket version of the Starter Pack. Microlink also provide a cheaper pack with a two speed modem for £99. This is actually a rebadged version of the Pace Nightingale modem.

MICROLINK

PLUSES

- Features to aid beginner – auto baud rate setting etc.
- All-in-one package – modem, software and interface
- Sophisticated facilities
- Supports XMODEM and KERMIT

MNUSES

- Documentation is unhelpful
- No step-by-step instructions for starting up

RANGE OF FEATURES	■■■■	EASE OF USE	■■■■
PERFORMANCE	■■■■	DOCUMENTATION	■

8000 PLUS VALUE VERDICT ■■■■

Verdict

The modem is certainly sophisticated enough for anyone starting in comms (and most existing enthusiasts for that matter). As a complete package it should be be the ideal start for a beginner. Sadly this hasn't been carried through to providing the instructions needed for the beginner to get to grips with the pack. A simple guide, with jargon explained, starting from setting up the modem, through the use of the Mini-Office software up to logging on to MicroLink would have made this package invaluable.

EXIT

What is a baud rate anyway?

It seems ironic that a part of computer science dedicated to making communications easier should create such a breakdown in communications because of the use of jargon. It's not quite as bad as CB radio and at least you don't need to put on the phony American accent.

But it is still a major put-off to be confronted with terms like 'baud-rate' and 'protocol' without a translator on hand. In simple terms the baud rate is just the speed at which the characters wing their way over the telephone wires. If you see a baud rate of 1200/75 that means that you can transmit at 7.5 characters per second and receive information at 120 characters per second. Obviously the higher the baud rate the lower the phone bill but the greater chance of mistakes being made.

The thing to remember about buying a more sophisticated modem like the one from Microlink is that you can forget about the more impenetrable details. If you are receiving data from another computer it will sense what speed it is coming in at and adjust automatically.

It can be set to one of three speeds, 300/300 baud (sometimes called V21), 1200/1200 (V22) and 1200/75 (V23), which by a strange quirk of fate turns out to be the choice of rates that Microlink and Telecom Gold offers. This also covers Prestel which only runs at 1200/75 although the modem does handle the Viewdata 1200/1200 and 2400/2400 rates which will be available on Prestel some time.

Protocols are a clever method of making sure that the text you send or receive is not corrupted by noise on the telephone line. This is done by breaking the text into chunks (128 bytes) and sending an internal check digit after each section. If the receiving computer comes up with a different internal check digit it quickly works out something is wrong and starts again.

Mini-Office Professional can handle the two best known protocols, XMODEM and KERMIT (no relation to the Muppet) and you can also send text in pure ASCII form with no check or in Expanded ASCII form which allows 7-bit systems to handle 8 bit information. Again the important fact is making sure you are using the same protocol at each end.

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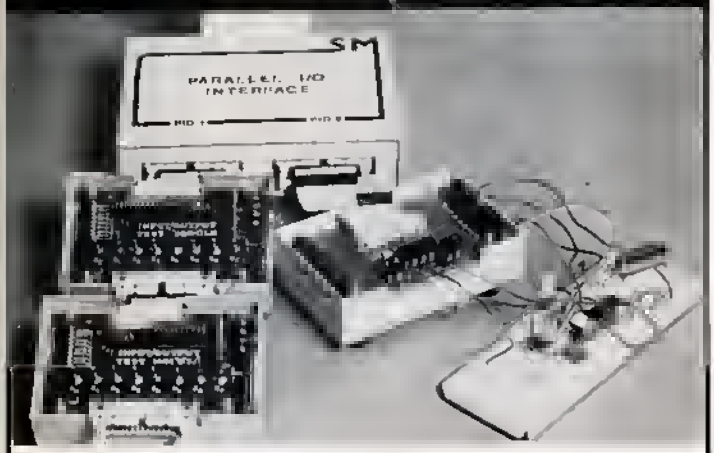

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CZECHING OUT THE PCW

Dr Stefan Rybar tells all about PCW life in the East Bloc

In Britain you own more personal computers than any other country. No matter how happy you are with your PCW, let's face it, you're just one among many: half a million PCWs, three quarters of a million PCs.... And most of you probably use computers at work.

But imagine yourself in a country where Spectrum rules supreme, facing only feeble competition from Commodore 64 or Atari. In conditions like that the PCW has come to be idolised, an instrument of revolution; at home, at work and in the computing education of an entire country.

In the summer of 1986, I found myself in Britain. Not as easy as you might think, but thanks largely to the Helsinki accord and an invitation from my sister who's married to a Brazilian, there I was. I knew instantly what I was soon to buy and my wife, equally enthusiastic, sacrificed any thought of renewing shoes and make-up for the forthcoming year as she contributed something like half an average annual salary towards payment of the Amstrad 8256.

Even the duty fees to bring my machine back into Czechoslovakia were not entirely negligible but I had my personal computer word processor and a printer. I work as a TV editor in the educational department and as such have to write about 40 pages worth of scenarios every month – in quadruplicate. And copiers are not very thick on the ground here, even if you can get permission to use them! Needless to say I enlisted the help of my PCW the very next day following my return.

Spreading the word

How can I share with you people who live in a computer-saturated society the effect of that first computerised scenario? Really, when some people looked at a simple document coming off the printer, they were speechless, and their fingers trembled when they picked up the disc. Yet we restrained our enthusiam, reluctant just yet to kowtow to an evil Western invention whose potential was a completely unknown quantity. What I quickly proved to a lot of sceptical people was that the computer offered very real help in cutting down paperwork and making organisation easier. Even Gorbachev admits that there's room for improvement.

To cut a long story short, I was quickly voted the resident expert on computers and became the host of an educational programme on computing for secondary schools – thirty half-hour episodes, which meant a lot of writing to do!. Scripts started pouring out of my PCW. No matter how sensibly I told myself that using an Amstrad was one of the simplest things on earth to do, I still felt for a short while the euphoria that must swamp an inventor on the brink of an important discovery.

Other improvements were soon self-evident, proving that perhaps after all I did merit my newly acquired fame. Everybody began to take note of the sudden order that the PCW had imposed on my life.

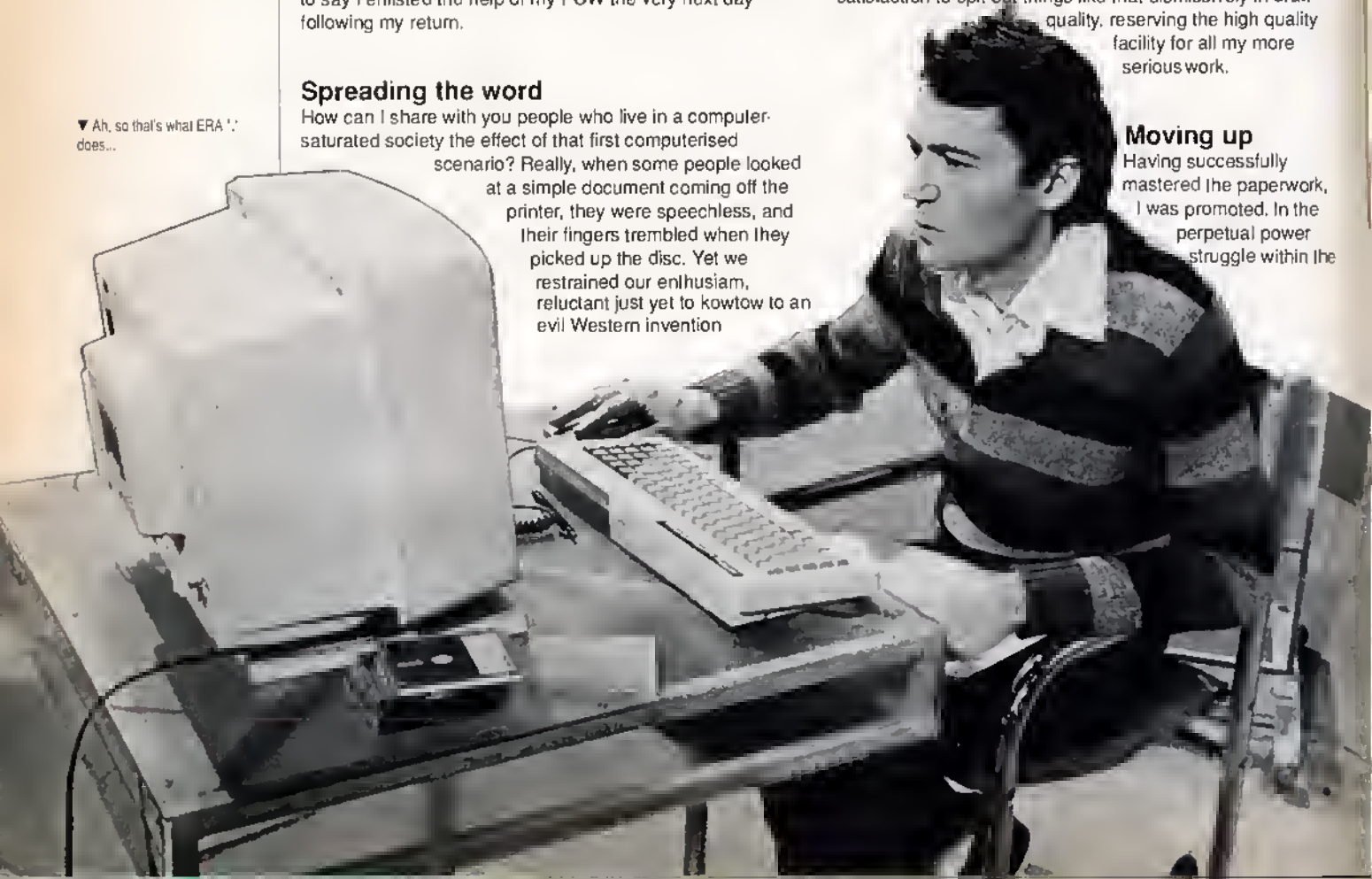
Normally a very disorganised person, I fell an easy victim to LocoScript's friendly command-lines. Soon, after cracking the enigma of layouts, settings and templates, my PCW was to prove a powerful tool in getting to grips with bureaucracy and red tape. Paper hurdles cleverly constructed to bring the television editor to grief were quashed, reduced a matter of seconds for the printer. Even now, it gives me the greatest satisfaction to spit out things like that dismissively in draft quality, reserving the high quality facility for all my more serious work.

Moving up

Having successfully mastered the paperwork, I was promoted. In the perpetual power struggle within the

Accent note

At the beginning those elusive haceks and other accents so vital in Czech were forgotten since LocoScript 1 was unable to reproduce them. Miraculously, LocoScript 2 does it all now, and even in kroner the £20 price tag wasn't too crippling – you can't imagine how important these apparently insignificant marks are!



▼ Ah, so that's what ERA '.' does...

▲ On air

▲ Who needs a photocopier anyway?

▲ Checking the script

department, the PCW began to assume the importance of a precious and tearful weapon. It was, for example, impossible to lose a memo, letter or script once it had been created. Even more alarming, it could easily be reproduced at any time and serve as proof to any statement made six months earlier and long-forgotten by everyone – except the PCW!

But don't let me create the impression that I myself became a bureaucrat. Writing is still the source of my income and even there the PCW is doing its best to pay for itself; mind you, it had probably already done that because my productivity had increased by about 100% – with an added bonus: being able to have more than one project on the go simultaneously without getting sidetracked.

Apparently there are over 150 computer magazines in Britain; in Czechoslovakia there is one, *Elektronika*. Of course it covers all machines, and as a result has a circulation of over 150,000. I managed to write about the success of the PCW in that too, and even quoted the over-the-counter UK prices of the Amstrad models, something normally unheard of.

Even my wife, who's a translator, began to use the PCW and her productivity increased as well. That's when I first faced the problem of time-sharing, but after ten years of marriage, there had been worse crises to contend with than that.

Improvisation

That's not to say, however, that there weren't problems. Getting into computers means learning and that means software. How do you explain what a spreadsheet or E-mail is without actually having access to them? Well, the next best thing – and I should know – is being able to read a decent magazine. And having an extensive knowledge of the only program you've got – LocoScript 2. Believe it or not, with just a little cunning it is possible to give a viewer a fairly accurate idea of what a spreadsheet is by mastering only Block and Paste facilities. After the February '88 issue, however, I was able to get one from Listings Plus – since then I've also made great use of the spell checker and mail merge programs that appeared in those pages.

E-mail proved slightly trickier to demonstrate, when we had no modem, no RS232 interface, no communications software and no connecting cables. We managed to fake a decently-shaped artefact closely resembling a modem and again Listings Plus came to the rescue. This time it was something like Telex Type. True enough, not exactly E-mail but even you lot over there can't always have it all, let alone a Czech television viewer. As there wouldn't be anyone else in the country with a modem to send E-mail to anyway, maybe I'm not missing that much.

There are a lot of stories behind my PCW. I could tell you about furtive border crossings in cars with back seats removed to accommodate PCWs; about the desperate search to get hold of software, and the joys of seeing a dubious copy of DR Draw; about the rumours that someone in Slovakia had the Desktop Publisher; about the black day when I somehow got hold of extra memory chips to do an upgrade through the friend of a friend, but they were the wrong type and nearly killed off my PCW...

We get very jealous seeing all those packages. We'd love to get hold of Stop Press, Hitch Hiker's Guide To The Galaxy, Head over Heels, joysticks, digitisers, databases, spreadsheets...but why? After all, it's fun to struggle with the smattering of software we have, and to be a big fish in a little pond. The PCW has been my personal revolution. EXIT

Czech facts

Anyone know much about Czechoslovakia? It's definitely behind the Iron Curtain, there were some troubles with it in Munich before World War II, and more recently some difficulties with the Russians and Dubcek. Oxford graduates might add that Shakespeare wrongly placed it by the sea, and beer drinkers may have heard about Pilsner without stopping to think that Pilsen is a town in Czechoslovakia, not in Germany. And, at the last count, there were at least seven PCWs in the country!

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GET SET

S is for Security, E for Erase-proof, T for Time-stamping – put them all together, you get SET

CP/M is a distrusting operating system. Whenever you type in a command like ERA *.* it asks you to confirm with a Y or N. The trouble is that after a bit you get so used to pressing Y that one day you end up wiping clean a disc which had the only copy of last year's accounts on it.

The answer is to make that file unerasable – to set it to 'read only' status which means you can read it and copy it but not write to the file – ie, you can't wipe over it. But SET can do much more than that.

First insert your CP/M work disc and type PIP M:=A:SET.COM. If you get one of those helpful messages like 'file not found' or the terse 'PIP?' then try it again with your CP/M master disc. Now you've got SET in the memory you can start to tinker with your data discs. The following assumes you've used SETDEF in your PROFILE.SUB file to instruct CP/M to look in the memory to find things, as well as the drive it's using; it'll do this if you're renamed the file PROFILE.ENG as PROFILE.SUB. If not you'll have to type M:SET where SET occurs.

Insert the disc to be protected in the drive – type DIR if you want to know what's on it. Suppose in amongst the junk there's a file called ACCOUNTS.87 which must not be erased under any circumstances. Just type SET ACCOUNTS.87[RO]. This makes it safe from erasure until you make it 'read-write' again with SET ACCOUNTS.87[RW]. This will protect LocoScript files from erasure under CP/M, but you'll still be able to erase a so-called would-be 'read only' file in LocoScript.

Smash the system

SET can also make files into 'system files' – these are files which exist outside groups and float around in their own space. They don't show up on directories (save for a 'SYSTEM FILES EXIST' message) and won't be seen by PIP to be copied unless you end the PIP command line with [R]. The main use for this is if you're working in different user groups, a system file is always available. So making PIP a system file is a Good Thing because if you decide to go off into group 12 you can still type PIP without getting that dismissive PIP? spat back at you (which you would get normally with PIP sitting in group 0). The command to do this is SET PIP.COM[SYS]. You can combine this with the above commands as in SET PIP.COM[SYS,RO] which systemises and read-only-ises the file. To bring a file back into the corporeal world of groups type SET PIP.COM[DIR] (for 'directory'). You can make whole discs read-only by, for example, SET B: [RO] or read-write by SET A:[RW] and so on.

Now, you may think this is quite a lot to be able to do, but it's just peanuts compared to the rest of SET's functions.

```
A)dir
A: SECRET  PLM : ACCOUNTS 87
A)set accounts.87 [ro]

A:ACCOUNTS.87  set to directory (DIR), Read Only (RO)

A)era accounts.87
A: ACCOUNTS.87  Not erased, Read Only
```

▲ Setting a file against accidental erasure

```
A)set a: [protect=on, name=Doris]
Label for drive A:
Directory Label   Passwds Reqd   Stamp Create   Stamp Access   Stamp Update
A:DORIS  .        on             off            off            off

A)set a: [password=GOPH]
Label for drive A:
Directory Label   Passwds Reqd   Stamp Create   Stamp Access   Stamp Update
A:DORIS  .        on             off            off            off
Password = GOPH
A)set accounts.87 [protect=write, password=gerbil]
A:ACCOUNTS.87  Protection = WRITE, Password = GERBIL
A)set secret.plm [protect=read, password=zho]
A:SECRET  .PLM  Protection = READ, Password = ZHO
```

▲ Setting a name and password for a disc, then a password for a file

```
A)type secret.plm

Password:

CP/M Error On A: Password Error
BDOS Function = 15  File = SECRET  .PLM
A)
```

▲ The result of getting a password wrong (note it isn't typed on to the screen)

You can set passwords and generally have great fun making it impossible for anyone to access them in any way if they don't know the correct password – including yourself if you have forgotten it. See the margin note though.

CP/M allows you to specify a password for each file on a disc, without which you cannot copy it or access it at all. Well, in theory. In practice it wouldn't put off the Special Branch from finding out all your shady insider dealings in GUINNESS.87 so don't rely on it too much.

First you have to tell CP/M that you're using passwords on the disc in question with the command SET A:[PROTECT=ON] or whatever the drive is. Now you have to decide on a password for the disc – otherwise anyone can easily turn off the file protection with the command SET A:[PROTECT=OFF]. If the password you choose is ENIGMA you type SET [PASSWORD=ENIGMA]. You can also label the disc with a name, so to call your disc 'Doris' you'd type SET [NAME=DORIS].

Wildly exciting

You can use 'wildcards' with SET (just as you can with most CP/M utilities). An asterisk can stand for anything and a question mark for any letter, so for example SET *.87[RO] would make all files ending in .87 – ACCOUNTS.87, TAXDODGE.87, SECRETS.87 etc. – read only. SET *.*[RW] makes all files on the disc read write, and SET ACCOUNTS.*[DIR] makes ACCOUNTS.BAK, ACCOUNTS.86, ACCOUNTS.87 etc. all directory files.

A command like SET *.??[RO] protects all files ending in two letters – ACCOUNTS.87 for example but not ACCOUNTS.BAK. Similarly specifying A?C?????.87 would work for ACCOUNTS.87 and ABCDEFGH.87 but not ABCDEFGH.12.

Other programs

Note that protected files simply won't run in BASIC, New Word won't recognise them, and Protext has its own protection facilities. Mini Office won't load password protected documents so SET can be used with Mini Office files.

LocoScript note

LocoScript, being a non-CP/M program, doesn't recognise passwords set in CP/M. So, if you have forgotten the password you set for a file you now can't get into, all you have to do is run up LocoScript and insert your protected disc. All the files show up in group 0 (unless they're system files – unsystemise them with SET as above).

Now use the copy facility ([f3]) to make a new version of the protected file in group 0 with a new name, then erase the old file. When you run CP/M up again you'll find your file unprotected.

```
A)date
Wed 12/15/82 20:09:50
A)date set

Enter today's date (MM/DD/YY): 06/12/88
Enter the time (HH:MM:SS):     03:08:00
Press any key to set time k

A)date
Sun 06/12/88 03:08:06
```

▲ Using DATE SET

```
A)initdir a:

INITDIR WILL ACTIVATE TIME STAMPS FOR SPECIFIED DRIVE.
Do you want to re-format the directory on drive: A  (Y/N)? y

Directory is password protected.
Password, please.  )qoph

A)set [access=on, update=on]

Directory Label
Password ?

Label for drive A:

Directory Label   Passwds Reqd   Stamp Create   Stamp Access   Stamp Update
---------------   ------------   ------------   ------------   ------------
A:DORIS    .          on             off            on             on
```

▲ Initialising the disc with INITDIR

Name: pass

Now you can go ahead and set passwords for individual files, eg. `SET SECRET.PLN [PASSWORD=MAGMA]` makes the password for the file SECRET.PLN 'magma'. Suppose this is a simple text file whose contents you could normally find by listing it out on the screen, ie. by typing `TYPE SECRET.PLN`. If you try to do this now you'll be prompted for the password and failure to deliver means the function is aborted. This will happen when you try to copy it, type it to screen, erase it, rename it or write to it.

You can go ahead and set individual passwords for all files if you like, but it's probably easier to set all files on one disc to have the same on with `SET *.* [PASSWORD=DOGMA]` or whatever.

Perhaps you don't mind people seeing what's in your files, you just don't want them tampering with the contents. You can do.this by typing `SET SECRET.PLN [PROTECT=WRITE]`. Similarly, `[PROTECT=READ]` requires the password for reading (ie. anything at all) while `[PROTECT=DELETE]` requires it only for deletion and `[PROTECT=NONE]` removes the password. A new password can be set by `[PASSWORD=STIGMA]` and setting the new password as blank by `[PASSWORD=` (yes, there's a [RETURN] straight after the equals sign!) also effectively removes it. You have to give the password before you can enact any of the above commands, of course!

EXIT

```
A)dir [full]
Scanning Directory...
Sorting  Directory...
Directory For Drive A:  User  0

   Name     Bytes   Recs   Attributes   Prot      Update          Access
-----------  -----  -----  ----------  ------  --------------  --------------

ACCOUNTS $7    11k     86 Dir RW       Write                   06/12/88 03:15
SECRET   2     11k     86 Dir RW       None    06/12/88 03:15  06/12/88 03:16
SECRET   PLN   11k     01 Dir RW       Read                    06/12/88 03:13

Total Bytes     =     32k  Total Records =     253  Files Found =    3
Total 1k Blocks =     33   Used/Max Dir Entries For Drive A:    7/  64
```

▲ The full directory – note the time stamps6

Time marches on

CP/M also has a variety of time-stamping functions. You can stamp your files with the time they were created, or the time they were last updated (ie. written to), or the time they were last accessed (ie. written to or read). First in addition to SET you'll need in your memory (use PIP as above) DIR.COM (side 2 of your systems discs on an 8000) and INITDIR.COM and DATE.COM (side 3 on an 8000). Unless you've used SETDEF as above you'll need to prefix all these with `M:` when you use them.

Your PCW has a clock built into it, but whenever you turn on the PCW it thinks it is Wednesday 15th December 1982. This has nothing to do with Creation theory but is some important event in the CP/M calendar. So, unless you have a 'real time clock' (a box which fits on to the back of your PCW and tells it the real time, see Quickies this month) you'll have to set the time manually every at the beginning of every session on the PCW.

On starting up, type `DATE SET` at the A> prompt. Give the data (day first, then month, then last two figures of the year – remember CP/M was invented in America) eg. `13/06/88` then the time. You actually press a key to set the time after you've entered it, so give yourself a few seconds' breathing space. If it's seven minutes past three in the morning, you'd enter `03:08:00` and press any key on the stroke of eight minutes past.

Now you can display the time whenever you like by typing `DATE` (`DATE C` displays it continuously until you press a key). Switching off the PCW resets time to 1982.

So your PCW can now tell the time, almost as well as a £2 digital watch. Great. But now you can use that DATE facility for something useful – marking your files with the time you created them, or 'time stamping'.

Put in the disc with the files to be stamped and type `INITDIR A:` or whatever drive it is. This will alter the disc to allow time stamping to occur. Confirm it with Y[RETURN] and don't worry if there are any files already on the disc, they won't be erased or anything!

You have three stamping options: creation time, update time, and access time, and can combine some of these. Recording update and access is the most useful combination.

To do this type `SET [UPDATE=ON,ACCESS=ON]`. From now on all your files will be 'time stamped' (obviously not retrospectively). Typing `SET [CREATE=ON]` would just record the creation time of each file.

Create a new file on the work disc – say just copy a file and give it a new name – and do a full directory of the disc with `DIR [FULL]`. You'll see the times of each file listed out. It'll also tell you if any of the files are password protected, whether they're directory or system files, and whether they're read only or read-write.

Note that if you do another `DIR [FULL]` now, the 'access' time has changed – a directory listing counts as an 'access'.

This can be a really useful facility; you can tell which files you haven't used for a while (and therefore which ones are the most likely candidates for erasure) and can check that updates are being carried out when they should (eg. for accounts files or databases). However you must remember to initialise your disc with INITDIR and *must* set the date and time every time you start up the PCW. You can only put 48 files on a time stamped disc (not 64 as normal). Time-stamped directories can also can be an unpleasant reminder of how quickly time passes.

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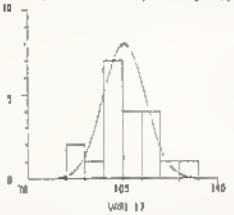

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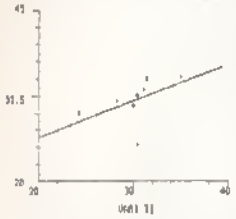

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LAUGHING MATTER

Think you could write comedy? Bill Matthews gives you some very serious advice

Comedy writing is perhaps the most accessible of the writing media, and remember that it may take months to write a play, and years to write a novel, but it only takes a second to think up a joke. The joke will probably be dreadful but you can't have everything. And once you've had a line or a sketch broadcast, and got your credit at the end, you're well on the way to being as famous as me, whoever I am.

The majority of comedy writers start in radio (some, like me, stay there). The two programmes that are most accessible for those starting out are *Week Ending* on Radio 4 and *The News Huddlines* on Radio 2. Both are sketch-shows, but have a portion of the programme dedicated to topical one-line jokes based on the week's news, often the sillier items – and to write these is the easiest way to get that first credit. Both have specific formats which you should adhere to when submitting material. Basically, you begin with something true (the set-up), and end with something made up (what we doyens of the comic mode term "the joke").

Here comes the best piece of advice I can give you. *Listen to the programmes.* Both Week Ending (deadline Thursday) and The News Huddlines (deadline Wednesday) are based around news stories of the week, and are strictly topical. When writing both lines and sketches, have in mind the style of the programme, and try to stick as closely to it as possible. An original angle or format for a sketch will give it a better chance of being broadcast, but don't try to subvert the whole style of the programme. You can only change from within.

London calling

The majority of lines are sent in through the post, but most sketches that go out are by writers who come into the BBC itself, get feedback directly from the producers, and perhaps re-write their sketches before they are accepted. So if you are set on writing comedy for radio, London is the place to be. But here comes more obvious advice. Don't give up the day-job, pack your bags and head for the streets paved with gold until you have had positive encouragement from producers, and you are confident that in time you can make a success. Then again, don't expect success to be instant. Don't give up after one week, but give yourself time to get used to the feel of the programmes and to your own style.

All writers are used as freelances; signing a contract does not make you an employee. If you are serious about wanting to be funny, my advice is to join the Enterprise Allowance Scheme as a comedy writer, and set yourself up as self-employed. You will be paid £40 a week for a year, with no restrictions on your earnings.

The Light Entertainment Department (Radio) of the BBC is along one corridor in 16 Langham Street (opposite Broadcasting House) in London. The producers' doors are always open (except when they're shut), and the atmosphere is of informality, approachability and nitrogen mixed with oxygen. It may seem daunting at first, but

A man walks into a pub and he says, "Did you hear the one about the man who walks into a pub...?" and everyone rolls about laughing. Then he goes into another pub and says, "I could do better than them lot on the telly."

But could he? The chances are that if he sat down and wrote his own jokes, they'd be about as funny as a witticism by the Duke of Edinburgh. Or about as funny as that joke. But if you believe you can write better comedy than you see on TV or hear on the radio, don't tell the pub about it – have a go instead.

Loads of money

You may have gathered by now that comedy writing does not guarantee you a season ticket on the gravy train. The levels of pay at the BBC – in both radio and TV – are a constant source of complaint among writers. A new writer will be offered £15 a minute for material broadcast, plus 65% of the original fee if the programme is repeated within a week (as most are). Fees go up in relation to both experience and success, so that an established writer might be on a rate of anywhere between £20 and £30 a minute.

Payment for lines is £7.50 each (£12.38 including repeat fee).

TV comedy on the BBC (without the repeat) is, curiously, even less well-paid for beginners. You might expect to start on £21 a minute. Once you're established in TV, however, the rewards escalate more rapidly than in radio. ITV comedy pays much better – anywhere between £50 to £100 a minute, depending on the ITV company. Question – in that case, why do I still write for the BBC? Answer – Bill who?

the natives are friendly if approached. At the end of the corridor is the Writer's Room, which is full of newspapers, ashtrays, old scripts, and forgotten hacks left over from the days of ITMA.

It is in this room that the Week Ending Non-Commissioned writer's meeting takes place every Wednesday at 1pm. Absolutely anyone – except perhaps Colonel Gadaffi and Ted Rodgers – is welcome. The BBC being a rigidly hierarchical organisation, you have to start off at the bottom – with a status somewhere between the teaboy and a piece of fluff on the carpet.

Commission impossible

The difference between the commissioned and the non-commissioned writer is that the latter hands in material without being asked, whereas the former has a contract to write for the programme and gets his or her name in The Radio Times. To get that first commission is the next breakthrough for the ambitious comedy writer. But the rumour that commissioned writers also earn the privilege of sitting in their own mess is unfounded, as anyone is allowed in the Writer's Room.

Getting a commission (this is a theory), opens the way to other work within the department. Other radio programmes aren't so easy to break into for those starting out, as they are usually fully commissioned already. But there are ways of finding out what programmes accept speculative material. If you look at the credits in the Radio Times, and see the magic phrase "and others" at the end of the list of writers, it's worth sending in sketches. However, if only one or two writers are mentioned, then it's a waste of time and effort to send anything in. Another way of discovering what outlets are available is to phone or write to the producer of the particular programme (ring 01-580 4468, and ask to be put through to the producer concerned).

Situation comedies on both radio and TV are never open to outside writers, but if you have already written your own sitcom, send it in with a synopsis, and the Script Editor will decide whether to commission you, whether it needs rewriting or, to be realistic, he may send it back. It is a better idea, before committing yourself, not to write the full half an hour's script, but to send in 6-10 pages of dialogue, along with a synopsis of the idea, the plots and the characters, and he will tell you if he is interested, and whether you will be commissioned to write the whole script.

Sketches by Bozo

Sketch shows on the BBC like Alas Smith and Jones, Naked Video, Les Dennis, The Russ Abbot Show and Little and Large (well, you can't be choosy), all accept unsolicited material. On ITV shows like Saturday Gang, The Grumbleweeds, and Kate and Ted (all broadcast early evening on Saturdays) are worth trying. However, if the man in the pub thought he could write better than that lot, he was probably right – but they wouldn't want to use it, they'd prefer a recycled joke instead. Who said crime doesn't pay? If you want to know in advance what forthcoming shows invite material, write to the Script Unit of the relevant company, and they'll send you a list.

The best bet on TV for the new writer used to be Spitting Image, which invites sketches of any length, and pays well. However, the programme has become increasingly the preserve of a clique of writers. But don't be discouraged by my cynicism. If your idea is original enough, it's in their interest to use it.

The most prolific ITV company in terms of comedy output is LWT, and much of their work turns up on Channel 4. This channel is where some of the best comedy on TV is found, yet there are few chances for the unestablished writer. Who Dares Wins and Friday Night Live, for instance, are both closed shops. But if you have your own idea for a series, get in contact with Channel 4 and they will give you a list of Production Companies who may be interested in what you have to offer. EXIT

How to be extremely funny

This is less a 'How to be....' than a 'What to do ...' article about comedy writing. It's a craft that has to be learned – by making your own mistakes and realising why they are mistakes. It's a balance between competence and inspiration, between formula and originality. You can sometimes get away with formal jokes (eg. Esther Rantzen has big feeth, Princess Diana is thick, Lord Hailsham is old, Fergie is fat, pot noodles aren't very nice, Oliver Reed drinks a lot, Barratts make small houses) by fitting them into new contexts, but the best jokes are ones that add a new twist, hit an original target or are flights of the imagination. Or anything about Gyles Brandreth. Comedy is all about recognition – now where have I heard that before?

Here are two formula Week Ending sketches, both featuring Mrs Thatcher and Douglas Hurd, and which make quite obvious points. But one of them is 'bad' and one of them (in my opinion) is 'good'. See if you can spot the difference.

One:

FX: DOOR

HURD: You wanted to see me, Prime Minister.

THATCHER: Yes Douglas Hurd, what is it?

HURD: It's about this report on page 17 of the Guardian about our policies on the Inner Cities having a terrible effect on the health of the people who live there.

THATCHER: Oh so then our policies are working after all.

HURD: Yes, that's right, Prime Minister.

Two:

HURD: Prime Minister, I'm under great pressure to do something about the Moonies.

THATCHER: The Moonies, Douglas? Why are they a problem?

HURD: Well, they take complete control of people's personalities and brainwash them into following every command.

THATCHER: *(Menacing)* Really Douglas, I don't see what's wrong with that.

HURD: *(Monotone)* No Prime Minister, neither do I.

● *Bill Matthews is 27 years old and has been writing comedy since 1984. He writes for Week Ending, The News Huddlines, Peter Dickson's Nightcap, Happy Hour and a comedy spot on radio's Sport on 2, plus two sitcoms. He claims the record for the longest apprenticeship on Week Ending, writing for the programme as a non-commissioned writer for over two years before finally being commissioned.*

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WRITIN OWN S

Rob Ainsley goes to Locomotive Software in Dorking for an exclusive look at the latest developments on LocoScript

For the first few years of its existence, Locomotive Software was just another name in the Yellow Pages, a backroom company known for writing obscure specialist business programs. Now there can be few PCW owners in the world (and there are over a million PCWs around somewhere) to whom the name isn't familiar.

After writing Mallard BASIC, which arose from work on file handling and indexing they were doing on an accounts program, Locomotive were approached by Amstrad and asked to supply the software for their new 'PCWs'. They wanted a word processor which would be simple enough to follow for first-time computer users yet powerful enough for business and heavy-duty home use. After nine months' gestation LocoScript was born.

It was made as foolproof as possible – it automatically formatted everything as you went along, for example, and whatever sequence of commands you typed in, however convoluted or 'illogical', it would give the expected results: the worst that could happen would be a helpful error message. For beginners, the comprehensive system of menus was developed, but as users got more experienced, they could make use of the 'set' keys with the letters appearing in capitals in the menus: quicker than selecting 'UnderLine' from the menu was the typing of [+]UL for example. As well as all this, there was LocoMail, a mail merge program, and LocoSpell, the spell checker and word counter.

Two time

The success of LocoScript encouraged the company to hit the commercial market with LocoScript 2. This answered the major criticism of version 1 – its notorious sloth – by including a 'jump to page' command (if you wanted to go to the end of a longish document from the beginning in Loco 1, you had to spend several minutes watching the entire thing wind through to the end) and added a staggering range of new characters plus the ability to use other printers without modification.

Since then has come Locochar, which allows the user to redesign up to sixteen characters and output them on screen and printer in all the high and draft styles available; and now come the extra printer sets and character redefiner.

The ability to use any printer has been a major feature of LocoScript 2. It will work directly with over 250 printers, thanks to the huge list of available 'printer drivers' – files which tell the printer how to interpret LocoScript documents – and the list is growing every week. If a printer doesn't have a printer driver available, Locomotive will advise on which is the nearest one to use; if the printer might be one a few people would use, they'll even write you a special printer driver for £15.

Good in anybody's language

LocoScript 2 is probably the most versatile word processor in terms of languages, characters, accents and printers supported that has ever been sold. It currently handles modern Greek, Cyrillic and mathematical symbols with ease

Shredding of the five thousand

After a few problems with the LocoScript 1 manual, Locomotive wanted to get it right second time round, and the first run of the LocoScript 2 manual – five thousand of them – was pulped because they weren't thought quite good enough.

No remix

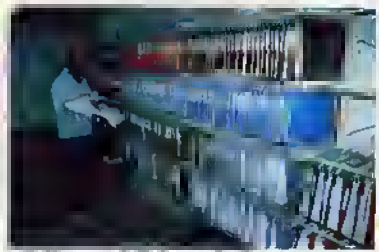
You can't mix sets in one document. This isn't for reasons of style but because it would be too difficult and too long, Locomotive say, to do the change over in mid-document.

9512 note

9512 owners are regrettably excluded from all this. The new fonts only work on 8000 printers.

LocoScript 2 was the first venture into the public marketplace for Locomotive Software, who had written LocoScript 1 for Amstrad. Now, in the wake of version 2's success, they're developing it yet further. The two very latest additions are a set of extra printer styles and a keyboard redesigner. Where is it all leading?

▲ Locomotive's programming room



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THEIR scripts

and can cope with every European language from Greenlandish to Russian. Even then, it seems, some people are never satisfied. "Our latest headache is breathing marks in ancient Greek," says marketing manager Howard Fisher. "We've had a lot of letters about it. The problem is that to cope with them properly you need multiple accents on one character, which we can't do just yet, but we're working on it." The designs of the current Greek and Cyrillic character sets were changed twice in response to feedback from scholars.

Anyone thinking that foreign languages in word processing are an amusing but trivial sideline should remember how spoilt the American English speaking world is. Word processors for the individual or small business in other 'minority' languages (Russian, say, or Hindi, with around 250 million speakers each) just don't exist and the only option for those working in such languages or in those countries is to buy a 'foreign' word processor and do their best to adapt it if necessary. The market in foreign countries is certainly there and Locomotive are doing their best to exploit it. Closer to home, there's a new Welsh LocoScript, which has attracted a lot of attention from the Welsh media.

So what next? Is LocoScript going further East? Was that copy of 'Alphabets of the World' really someone's lunch break reading? Howard wouldn't be drawn, noting only that "there's a lot of programmers in here, and they're all working on something." Maybe it was just a trick of the light, but it seemed that some of the writing on one of the screens was going from right to left...

LOCOSCRIPT 2 FONTS

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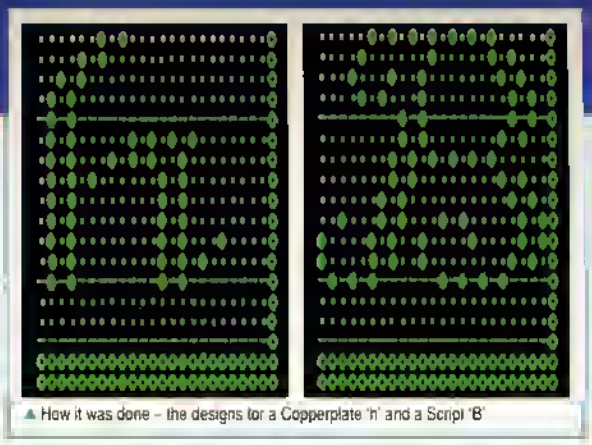
The tell-tale sign of any PCW document is that typeface. You can recognise PCW printout anywhere – indeed, literary agents and publishers are heartily sick of it by now. But, given a dot matrix printer, there's no good reason why you can't print out letters in a variety of styles to suit the document; all you need to do is change the dot patterns the printer carries for each letter.

There are, however some bad reasons. To cope with a full character set in screen, draft and NLQ styles requires a lot of space – that's why sixteen characters is the maximum number redefinable under Locochar, the program which lets you design your own characters. Larger character sets are run through special compression programs which rewrite the set in a way more economical on space. So, if you wanted to design your own set, you'd need a very large computer plus the compression software to shoe-horn the set onto a three-inch disc.

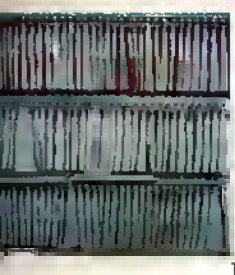
Demand for variety of printer output is clearly there and so Locomotive decided to make available this extra set of styles. Designers were brought in, and using a program rather similar to Locochar plus those compression routines, they have been fitting extra styles onto the sixteen dot grid your printer limits you to. All the characters and accents – even the Greek and Cyrillic ones – are being represented in each font. As models for many of these characters are not available (what should an art deco Cyrillic character look like? Or a copperplate style Greek alphabet? Or a calligraphic circumflex?) language specialists have had to be consulted.

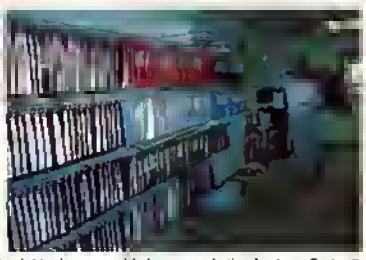


▲ How it was done – the designs for a Copperplate 'h' and a Script 'B'

Easy does it

Using the new styles is very simple. So long as the file containing the style you want is in group 0 of the M drive, it'll be available for use. They have names like MATRIX.#RO, and any of them on your start-of-day disc will



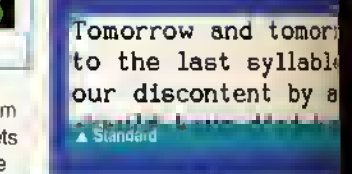


This lot is the assembly language listing for LocoScript 2

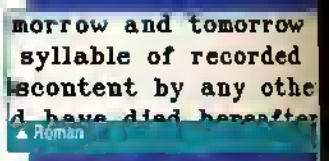
LOCOSCRIPT

77% isn't bad

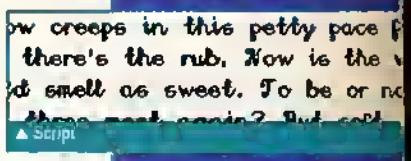
At time of going to press two of the extra sets were unavailable. These will be 'Locomotive' and another sans serif set.



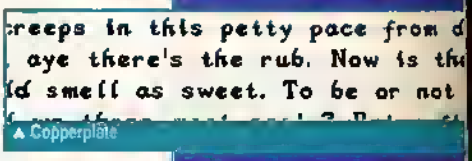
▲ Standard



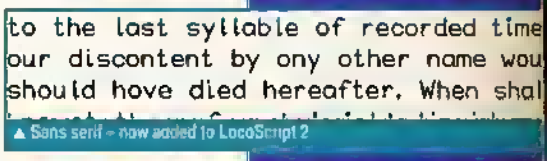
▲ Roman



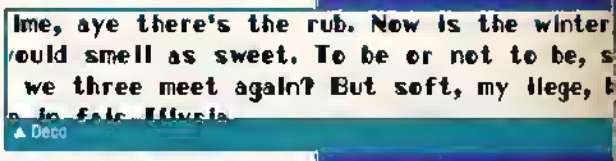
▲ Script



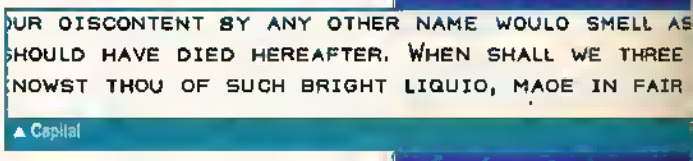
▲ Copperplate



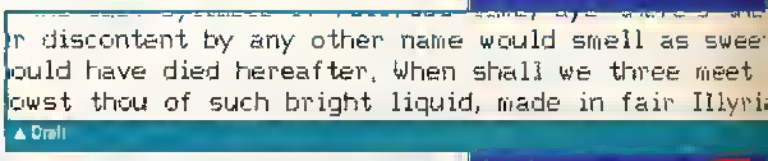
▲ Sans serif – now added to LocoScript 2



▲ Deco



▲ Capital



▲ Draft

LOCOSCRIPT 2 FONTS

PLUSES

- Eight new fonts, one coming for free
- All accents, characters and alphabets supported in every style
- Easy to use
- Cheap
- Can break out of that one-pattern printout

MINUSES

- Can't mix styles in one document
- Limitations of 16 dot pattern mean quality can't be brilliant

RANGE OF FEATURES	■■■■	EASE OF USE	■■■■
PERFORMANCE	■■■	DOCUMENTATION	■■■

8000 PLUS VALUE VERDICT ■■■■■

cp software

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automatically be copied to drive M for you; any others can be copied using [t3]. You can have up to ten available at any time, which should be enough for most people.

You can check on the sets available by pressing [f6] in the disc manager and selecting 'Character sets'. To set up a document to be printed out in Roman, say, you would press [t1] for Document Setup while editing and take [t6] 'Printing'. The 'character set' option lets you choose a set for the document, and when you come to print it out, you 'change to style intended for document' when prompted.

The sans serif style (plus the standard) now comes bundled free with LocoScript 2. An odd side-effect of the space re-organisation necessitated by including both styles on the disc is that draft quality comes out better than before! Seven or so extra styles can be bought separately. Given the limitations of the sixteen dot matrix, the new characters come out surprisingly well; many people may well use the Roman set as standard and while the two 'handwritten' styles won't fool anyone, they still look pretty good. Of course they have to be used in proportional spacing or the result is very odd looking.

The new sets have been very thoughtfully put together and are an easy way to put life and variety into all PCW work from academic papers to news sheets to letters.

LOCOKEY

£14.95 ● Locomotive (0306 740606) ● All PCWs

The logical successor of Locochar, the program which lets you redesign sixteen characters in LocoScript to your own specification, is Locokey.

For anyone who wondered why the opening screen in LocoScript 2 had inexplicably gained a 'GB keyboard' message when they upgraded, all can be revealed. This is a keyboard customiser which allows you to make any key produce any letter, a little like SETKEYS in CP/M. So all you Dvorak fans and French AZERTY standard devotees can reconfigure your keyboards without having to hack into the depths of the LocoScript system files with SID.

However, the program also lets you produce those Locochar-redefined characters with one key, so you can make [EXTRA]c produce your church symbol, or £#<> your four Chinese characters for Shark Fin Foo Yung, or [ALT] plus the numbers one to ten your border characters. Users of exotic foreign languages like Welsh can assign any combination of accent and letter to a key – so w-circumflex could be produced by the [key for example.

Shifty characters

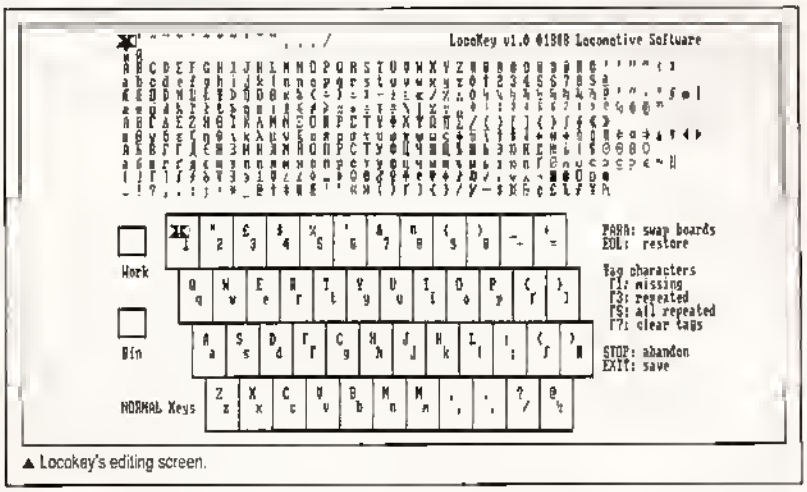
The program itself is simple to use. You have a plan of the keyboard at the bottom of the screen and all the available characters at the top – you can select a Locochar-redefined set if you like. You have a 'Work' box containing an 'active' character which you can pull from either keyboard or character set and assign to any key in any shifted (SHIFT, ALT, EXTRA, SHIFT+ALT) or super-shifted state (the Greek, Cyrillic and Symbol super shifts). The [COPY], [CUT] and [PASTE] keys do the jobs of swopping and moving characters. Special functions let you switch entire sets automatically (to make the Greek characters standard and the English set go under super shift, for example). Into the 'Bin' box goes the last discarded character, which can be pulled out in an emergency. It'll even tell you if you've put any characters in twice or missed them out.

Font memories

The idea of extra fonts for LocoScript isn't new, of course. SuperType, from Digita (£24.95), gives you eight extra character sets usable in either CP/M or LocoScript (SuperType II for LocoScript 2). Some of the fonts are similar to the new LocoScript ones (the four similar 'business' fonts are like Loco's sans serif, the 'vaudeville' like Loco's Deco) and some aren't (you also have outline, stencil and the usual olde Englishe styles).

All the fonts work in italic, draft, NLQ, bold etc., but of course they aren't supported across the range of all LocoScript characters or accents, as are Locomotive's fonts. They have to be installed (just once) on your LocoScript disc which takes a few minutes and work in a slightly different way with the result that you can only really have four available at any one time.

It's a perfectly good package and if you already have SuperType you won't need the Locomotive fonts unless the different styles appeal to you – which they may well do. If you work with a CP/M word processor such as Protext of course SuperType is what you want. On the other hand Locomotive's fonts are definitely the better buy for the LocoScripter.



▲ Lockey's editing screen.

When finished, the new 'keyboard set' is saved under an appropriate name and the file put on a new start-of-day disc in place of the standard KEYBOARD.JOY (so your own 30-character message will appear in place of that 'GB keyboard' message). All you have to do now is put in the disc and switch on; the keyboard will produce the characters you assigned to it in Locokey without you having to mess around changing over character sets or setting up documents to expect this or that.

Locokey is a well-written program, quick and easy to use. It should satisfy all the requirements of those who like tinkering with the LocoScript setup and will be useful to anyone who needs funny characters or Locochar symbols in their everyday work. It's not the sort of thing you'd use more than a couple of times so it would be an expensive toy. It's a product with a particular purpose which will only be valuable to a few per cent of the PCW population – but remember that figure of one million PCWs round the world. EXIT

Dvorak's new world

The standard QWERTY keyboard is, claim many people, dreadfully slow, being designed to slow down light-fingered typists who were too fast for their cumbersome nineteenth-century machines. An American called Dvorak proposed a more efficient distribution of letters which has never caught on but has many supporters.

He was no relation to the composer of the famous Symphony No. 8 'The Hovis'.

And then?

How you change the letters on the keytops once you've redesigned your layout is another matter. Enthusiasts have suggested Tippex or Liquid Papering over the tops followed by permanent markers and clear nail varnish.

LOCOKEY

PLUSES

- Enables customisation to Dvorak, Azerty standards etc.
- Handles any combination of accent and character
- Can swop whole sets of characters in one
- Works with Locochar characters

MINUSES

- Might only use it once or twice

RANGE OF FEATURES	■■■■■	EASE OF USE	■■■■■
PERFORMANCE	■■■■■	DOCUMENTATION	■■■■■

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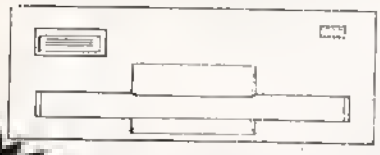

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New PCW software from ARNOR

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SPREAD YOUR SHEETS AND FLY

Alec Rae gives a few more hints on how to tackle your business accounts with a spreadsheet

In business time is money. So while you may agree that it would be nice to write your own accounts package on a spreadsheet, you may feel it is too time consuming.

There will be a bit of time involved in setting up your spreadsheets. But once this is done, by using a template-like system of matrices (that's the plural of matrix, not something you sleep on) you can re-use this initial work over and over again.

In the Cracker Turbo package used last month to set up the cashflow sheet, one really useful feature is the 'Macro'. This works a bit like a submit file in CP/M. You write a load of commands in a cell complete with [RETURN]s, and then simply by typing the cell number at the correct moment all the commands are carried out. If you have a list of commands too long for one cell just make the last command call on a macro in another cell.

You can create loops by calling on the number of a previous cell in the sequence or even the cell you are working in. This means the commands are carried out continuously until you stop it or until it comes up with an error (like reaching the end of spreadsheet).

So, for instance, say you decide to write the heading 'Amount' at the top of every third column. Go to a blank part of the sheet and pick a cell – say A10. Type in the commands to change the format in a cell to text (set right usually at the top of a column of figures) just in the same order as you would normally with a `@` instead of [RETURN]. (`FTRE@`) and end this with a '*' and the number of the cell below, followed by a `@` (`*A11@`) calling into play the commands that are listed in that cell.

Move down and enter the details you would normally use to type in the word 'Amount' and then move the cursor along three columns (`Amount@RRR`). End this cell by calling the first cell (`*A10`) and the process starts again until you reach the end of the line.

Let's get started

Macros come into their own when you are wanting to set up a certain layout. Say you simply want a sheet to keep track of the orders you took in a week. You would want perhaps a text column for the details, a finance format column for the amount and integer column for the account number.

With Cracker you always start with a totally blank screen so you have to create a couple of columns to work in. Set up a couple of columns in heading format about 20 characters wide to accommodate long macros. If the formula runs over the space available it will run into the next cell in heading format. In normal text format it will be cut off at the space available so it would seem as if you had lost the end of your formula.

In Crackerspeak the commands to do this are `I2C20` – English translation (I)nsert (2) (C)olumns, width (20) characters – press [RETURN] twice and two columns one line deep will appear. Don't worry too much about having to remember these letters, as you are prompted as you go along. After entering `I` Cracker will show the word 'Insert' and then give you a choice of options '0-9, Column'. Here you can enter `C` for one column or a figure for a number of columns. Each stage is confirmed as you go along. Now insert, say, 25 lines, a reasonable screenful. You can add more later.

Formula writing

Then fill in the top formula as shown in fig 1. It may look at first like a jumble of letters but if you break it down you can see what's happening. The first line says (I)nsert one (C)olumn (12) characters wide (the @ is [RETURN]), with the format (T)ext justified to the (R)ight (all the text runs up to the right hand side). If you want a different width or format just run through the process in normal command mode to see what commands are required and then type those letters in the cell.

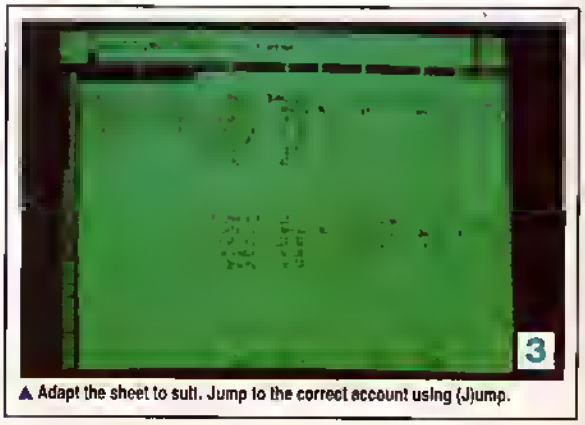
The last figure `*A2` calls the formula in A2 into play. This simply enters the words 'Details' at the top of the column. The full stop is just the command you would normally use for

Format matters

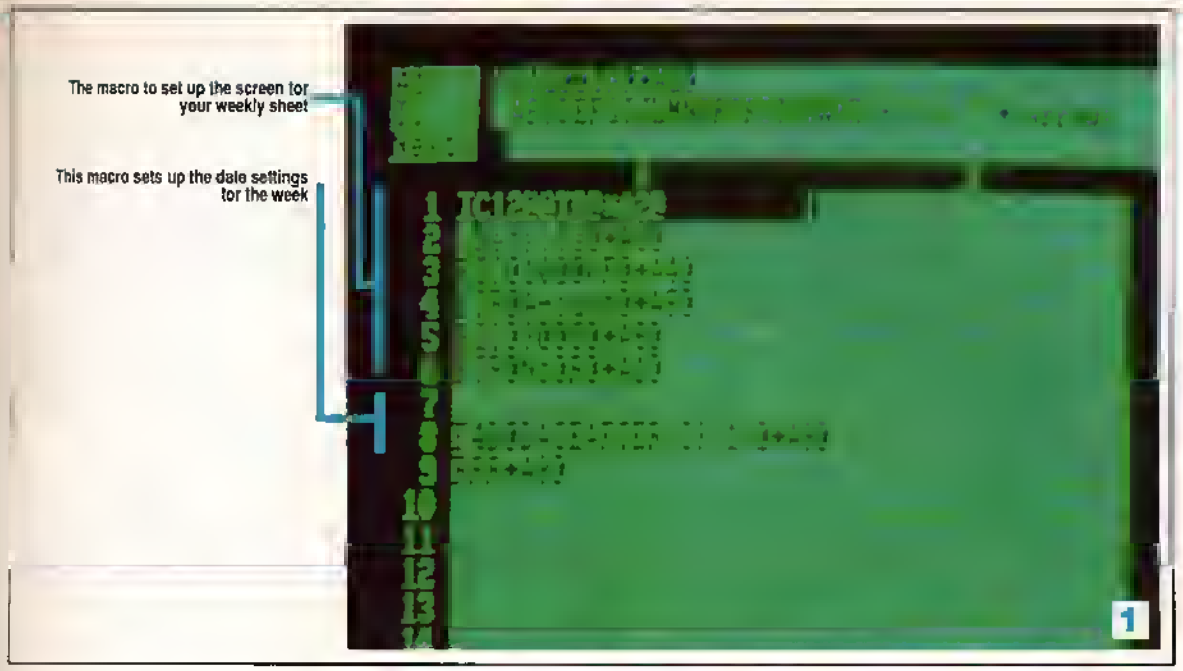
Although you can write anything you want on a spreadsheet you still have to tell the program in advance what sort of thing you are going to write.

For instance if you want to write the words 'Account No' at the top of a column you will have to tell the spreadsheet you are going to put text in that box. The cell below will probably be a whole number (the account number) so you have to tell the computer to expect a whole number (though 'integer' sounds much more complicated so is preferred) while in the next column you might want the figures to go in a financial format (ie. with two decimal points).

This is necessary so that you won't start trying to add the words 'L. Bloom and Daughters' to £23.50 and subtract the date. Ensuring you have the entries set to the right format is one of the most time-consuming and frustrating aspects of spreadsheeting. This is where clever use of macros to run through your lay-out changing formats to the suitable setting is ideal.



▲ Adapt the sheet to suit. Jump to the correct account using (J)ump.



entering text in a cell.

Again this ends by calling cell A3 which moves one space to the right and inserts the next column – this time a normal finance format column 10 characters wide.

As you are wanting to enter the word 'Amount' in a finance format column you would normally have to change it. So the next cell (A4) does this. `FTR` means the (F)ormat should be (T)ext (R)ight justified. As this command puts you straight into the position where you would enter text you do not need the full stop you normally need to enter text in a cell. Again A5 inserts a small three character wide integer column and A6 adds the words 'No' for the account number there. This is only a suggestion of course. Choose the number, width and format of your columns to suit yourself.

Loop aper

At the end of the macro in A6 you will notice "A1'. This calls the first cell and starts the process all over again. As you will probably want this sheet set up for five or seven days you want this series of columns set up across the page. There are two ways of doing this. Put a `@` at the end and the process will go on until you stop it; leave it off and the process will pause at the end of each cycle to wait for you to press [RETURN]. Do this the required number of times and you now you have the right size of spreadsheet.

You probably won't want to have this right at the top of the screen (to allow for a heading and other details) so go down three cells move into the second column and type in `*A1`. The Macro then starts its amazing progress across the screen, adding columns as it goes.

You will also have two heading columns at either end of the sheet which you can use for notes to help you find your way about the sheet (see fig.2) by simply using `BC` (or blank column) the command to clear the entries. Or else simply remove the whole column with `ZC`

Type in `Monday, Tuesday` and so on above each 'Details' column and save this layout under a name like `Matrix` so you can just call this up and have a blank sheet to start each week.

Adapt this layout as you want. You could have individual accounts in various places on the same sheet and then just copy all the relevant details to the correct account – see fig.3

EXIT

▲ Save this as your starting Matrix

Day by Day

When you call up your blank sheet on a Monday, wouldn't it be great if you could just enter the date in one column and have Cracker work out the data for all the other day's in the week. Well, you can.

Cracker has a wide range of features dealing with time – some of which are admittedly a little obscure in practice. But the one that is of most use at this moment is DATEAFTER. In Cracker the date should be entered in a certain form. For instance 106.1988 is the 1st of June and 3112.1988 is the 31st December. It seems obscure but you soon get the hang of it. Of course to put this in a cell you have to set the format to four points decimal, `F40` [RETURN].

So if you put the date in cell C3 (above the first column of 'amounts') and then put `DATEAFTER(C3, 1)` in F3 (the next 2 amounts column) the date for the next day appears in this cell.

To help you do this you can make another macro (see the lower macro in fig 1). Place the cursor in the cell F3 and start it running. This will put the same formula every three columns to the end. You then have to run through it manually changing the last digit in brackets). For instance for Wednesday you would have `DATEAFTER(C3, 2)` –two days after Monday's date.

Save this on your Matrix and when you start the week you just put the date in the right form in cell C3 (for example 3005.1988) and the whole week will be correctly dated. Remember to change C3 to be four points decimal format or you could have difficulty reading the date of course.

Turbo Powered?

There have been arguments about how much quicker Cracker Turbo is than the old Cracker 2. Certainly, everything being equal Turbo is faster for most functions. Obviously the bigger the spreadsheet you are working on the more time that is saved.

For instance loading a relatively small weekly report takes 13 seconds on Cracker 2 and 11 on Turbo. Recalculating the sheet took 10 seconds in Cracker 2 and 9 in Turbo.

In the complicated task of setting up the Matrix using macros you could save over a minute: Cracker 2 clocked in at 3 minutes 38 seconds, Turbo at 2 minutes 25 seconds.

On the other hand there were times when Turbo actually took longer. To draw a simple bar chart Cracker 2 took 1 minute 16 and Turbo took 1 minute 20 seconds.

PRINT BIG

Two poster printers – one a tenner, one for fifty quid. What's the difference?

HOW DO YOU LIKE THE OUTPUT FROM DECOFONT

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No matter how nicely your word processor prints out your words, there will come a time when you'll want to say something in letters 10 feet high (well 10 inches high anyway). Recently two additions have been added to your choice in this line – a new program, Postafont, and a new version of an old favourite Signwriter.

First it must be said that neither program is totally 'user-friendly'. If you have CP/M phobia and want something that will gently lead you through the process of creating and printing your sign, you might be better off sticking to something like Tas-Sign.

And secondly you will have to accept that you will not be doing anything in a hurry (and that includes Tas-Sign). It seems that printing posters is always a long drawn-out process. However both programs seem to tackle different ends of the market quite successfully.

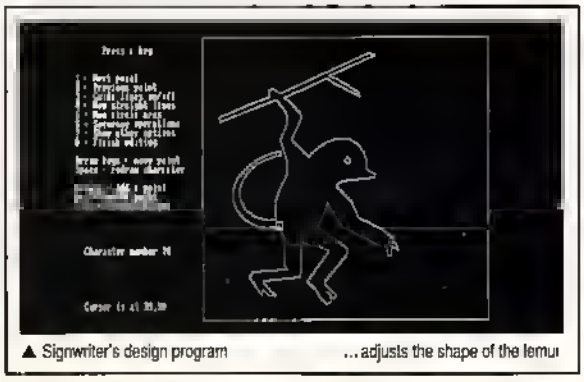
THIS IS THE OUTPUT FROM Poster Printing

Cheap and cheerful

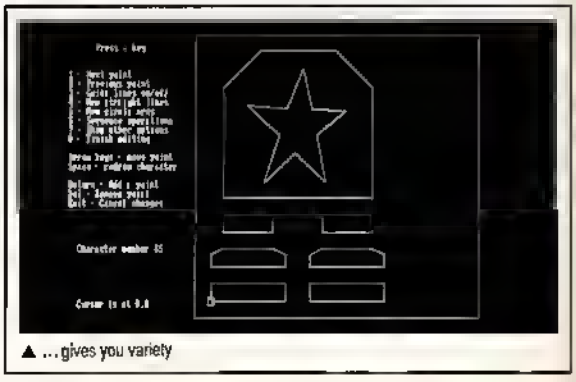
Postafont comes from the Advantage User Group for only £9.95 with a full manual and, as such, you can't really complain if it doesn't make life as easy as a slick program costing three times as much.

Initially, perhaps, it's easy to get bogged down in a rather tortuous method of working, but it's really simple once you get the hang of things. The major problem is that the commands to print the poster are contained in a text file you have to create yourself – no menus to gently lead you through. If you don't have a CP/M word processor (like Protext or NewWord) this means grappling with RPED the PCW's text editor. Not impossible but not exactly fun.

But if you make a mistake you have to go back to RPED to make changes. On the other hand it is easy to ring the changes with five fonts which can give solid or hollow characters in one of



▲ Signwriter's design program ...adjusts the shape of the lemur



▲ ...gives you variety

Animal note
The most original font in Signwriter is 'Zoofont' a wide range of animal shapes although the choice of animal seems a little obscure. It includes lemurs, cockroaches and narwhals while missing out vital animals like llamas and gerbils.

six patterns – all in the same poster, if you've got the nerve. To save you too many worries when setting up, there is a complicated install program to run but this is still a reasonably taxing exercise.

Power vs. friendliness

Signwriter is not too accessible simply because it tries to do so much. It is really written for machines with a bit more computing power than the PCW and sometimes this has meant a compromise between user friendliness and power – with the finer points of user friendliness usually losing out.

There are a number of programs on the disc and it is not always obvious at first what they are all for. Reading the manual does give you a clear idea of what is required but a simplified flow-chart style set of instructions would have been helpful.

Despite seeming limitations (for instance it can only handle one font at a time), Signwriter does offer the widest range of features of any of the poster printing programs. There are 20 extra fonts available including some quite imaginative ones.

Perhaps most exciting is the 'Iconfont' – a series of symbols with everything from a sign for a toilet door to the Taoist Yin-Yang sign – the only poster program that gives you the ability to do this.

DIY symbols

This can be taken further using Signwriter's design feature which allows you to modify the letters in a font, write your own font or even create your own symbol – say a company logo. This is admittedly about the slowest exercise possible on a PCW. The screen display is painfully slow but it is the only program of its type to do this so you really just have to live with it.

▲ An Iconfont symbol

Another time-consuming feature of Signwriter is running Fontcalc, a program which produces a couple of files in M drive for the particular font to run from. You need these files to use Signin (the program to produce signs) or Signout (to quickly print out a sign from a file you have already created) but, once run, you can save these files to disc for fonts you will be using regularly. These then have to be PIPped into M drive when you start again

One possibility, especially with complicated fonts like Iconfont, where you probably only want one or two signs, is to put the 'font' file into a word processor, cut out all the stuff you don't want and save as an ASCII file before you run Fontcalc. This also saves some problems with loading that can be experienced with a complex font.

That'll fit!

One major advantage of Signwriter is the way it checks out that your sign will fit the space available as you go along. As you pick the size for each line it will tell you if you have sufficient space immediately.

The Advantage program on the other hand has no checking device (except calling it up on screen first) so you could discover that the line is too big only when you start printing out – a very frustrating experience.

There is an obvious difference in the quality of the finished product – as would be expected. Signwriter does produce the highest quality of all the signwriting programs, although it obviously does take a time to do this.

Verdict

Postafont – Ideal for a confident PCW user who occasionally produces a poster. The program will produce virtually anything you want and at the price you can't complain about.

Signwriter – For the user who knows exactly what he wants and won't be content with anything less. It is the only program that gives the flexibility and range of features needed. EXIT

POSTAFONT

PLUSES
- Unbeatable value
- Allows you to mix fonts and styles

MINUSES
- No warning if your poster is too big for the paper
- You have to have a text editor and create your own files to run the program

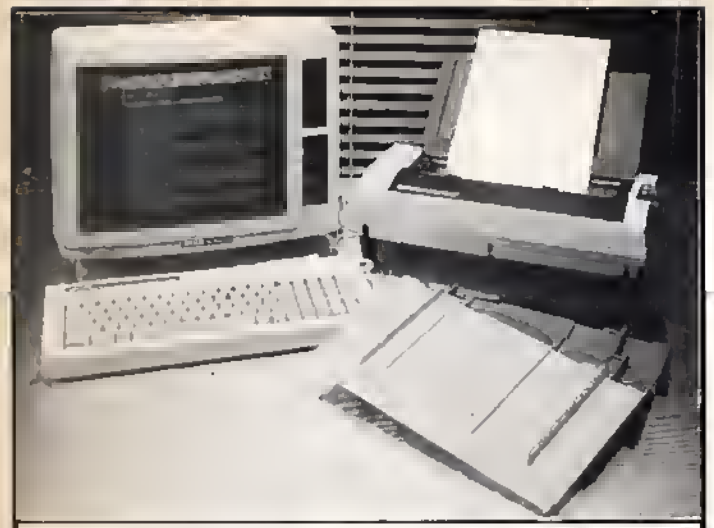
RANGE OF FEATURES ■■■□□ EASE OF USE ■□□□□
PERFORMANCE ■■■■□ DOCUMENTATION ■■□□□
8000 PLUS VALUE VERDICT ■■■■□

SIGNWRITER

PLUSES
- Allows you to redesign fonts and design your own symbols
- Wide range of interesting fonts including symbols

MINUSES
- Numbers of programs to run causes confusion
- Font design is slow

RANGE OF FEATURES ■■■■□ EASE OF USE ■■□□□
PERFORMANCE ■■■■□ DOCUMENTATION ■■■□□
8000 PLUS VALUE VERDICT ■■■■□



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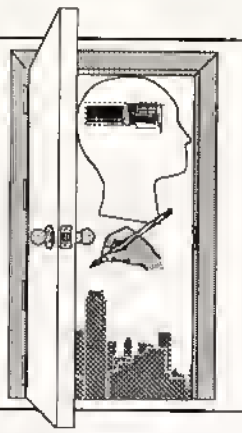

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Features:- **UniForm-PC** allows CP/M diskettes to appear as DOS diskettes. This allows you to manipulate data on CP/M format diskettes with familiar DOS commands and also supports MSDOS formats other than the IBM standard. Support is provided for 48 TPI, 96 TPI, 8 inch, and 3.5 inch disk drives including the new IBM PERSONAL SYSTEM2 and Apricot 1.4 Megabyte format. Any **UniForm-PC** warning messages appear in a non destructive window near the centre of the screen. After reading the message, a single keystroke will erase the message and restore the screen to its original condition. **UniForm-PC** will automatically display all formats that can be supported with the types of drives available on the computer and allows a default format to be set, so that it is automatically active each time the system starts up. When used with **UniDos**, allows your computer to run CP/M programs without additional hardware.

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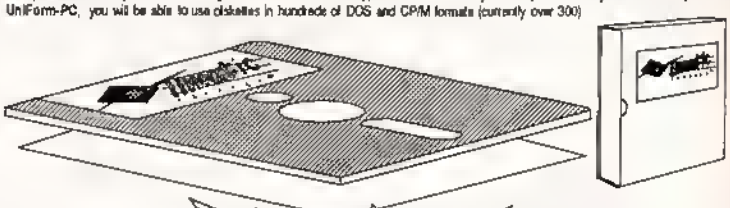

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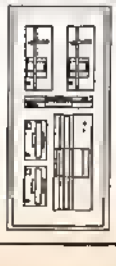

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ORGANISE YOURSELF

COMPETITION!

Amstrad owners are an upwardly mobile lot so it's no surprise that the personal organiser boom should make its way onto the old PCW. In conjunction with Kempston Data, 8000 Plus is giving away five prizes that should help all you yuppies, dinkies, woopies, yummies and noddies.

First prize is a Kempston mouse and interface (compatible with Slop Press and the Desktop Publisher) plus Daatatax, normally £79.95. This program does all the functions you'd expect from your personal organiser – keeps a diary, names and addresses, notes and so on, and prints them out for you on special personal organiser-sized paper, which is supplied. The two second prizes are Daatafax plus a vinyl binder, subject tabs and stationery (usual price £49.95), and the two third prize winners will receive the Daatafax software plus stationery (usually £39.95).

Your mission

Here's what you have to do. Below are five 8000 Plus readers, lettered A to E, and five categories – yuppie, dinkie and so on – numbered 1 to 5. All you have to do is use your skill and judgement to match the character with the category – for example, if you think that Piers ffoulkes-Ccarrington is a dinkie, write "B – 3" and so on.

Write your answers on a postcard or on the back of an empty sealed envelope and send your entries to: *Organiser Competition, 8000 Plus, 4 Queen St, Bath BA1 1EJ* to arrive by 6 July. Usual rules apply.

A Charlotte Malakoff
Works for a recruitment agency in Covent Garden. Lives with an advertising salesman in a flat in Hampstead.

B Piers ffoulkes-Ccarrington
Works for a Securities house in the City. Runs a Porsche. Has three CD players. Holidays in Thailand and Macchu Picchu.

C Tamara Ward-Patterson
Works as a Production Assistant for a TV company. Organises political rallies in her spare time and runs an underground magazine.

D Eric Lombard
Owns four publishing companies. Runs a BMW, registration number EL 1. Spends six months of the year on vacation playing golf.

E Fred Arkwright
A bottle packer from Goole. Married. Four children. Has a 1978 Escort with no tax. Holidays in Bridlington.

1 Yuppie (young upwardly-mobile person)

2 Woopie (well off older person)

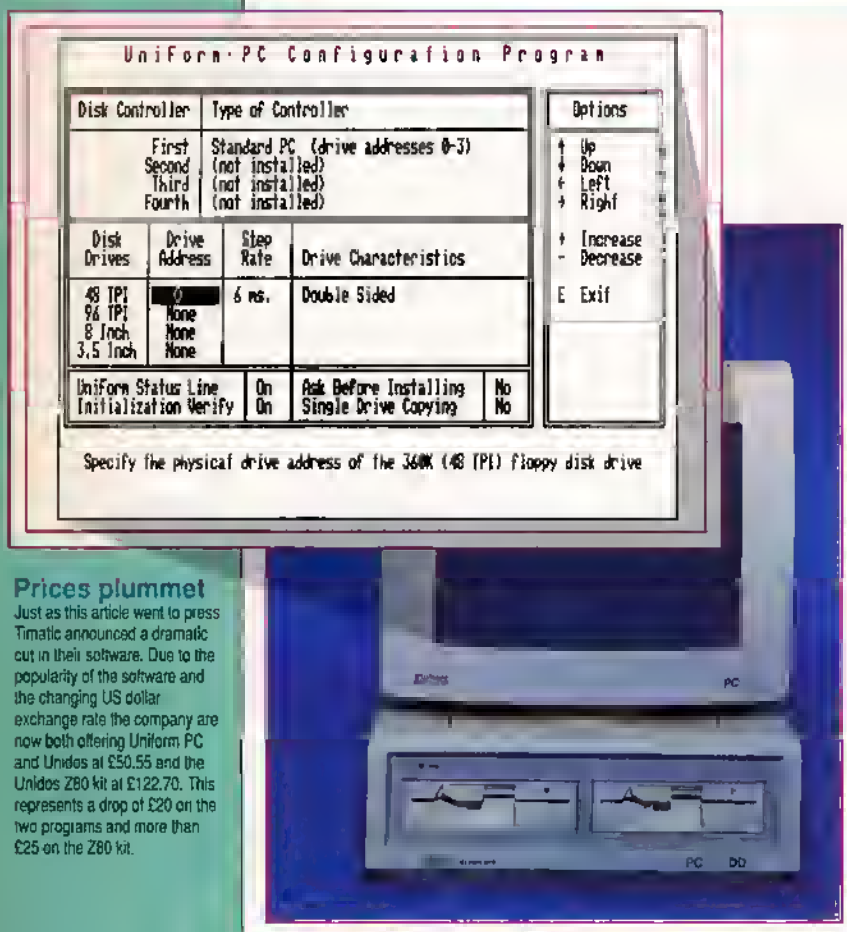
3 Dinkie (double income, no kids)

4 Yummie (young upwardly-mobile Marxist)

5 Minkie (measly income numerous kids)

LET COMPUTER TAL

Want to hook up your PC and PCW together?



Prices plummet

Just as this article went to press Timatic announced a dramatic cut in their software. Due to the popularity of the software and the changing US dollar exchange rate the company are now both offering Uniform PC and Unidos at £50.55 and the Unidos Z80 kit at £122.70. This represents a drop of £20 on the two programs and more than £25 on the Z80 kit.

Loco motionless

Unidos won't work with LocoScript, of course, because it doesn't run under CP/M.

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Unidos Z80 (including Uniform PC) £122.70 /
External 3 inch A drive £149 /
External 3 inch B drive £199 /
External 5½ inch drive and software £209
Timatic Systems (0329 239953) ● All PCWs

There have always been ways of transferring information between PCW and PC, usually involving long and tortuous file transfers through a cable. What Timatic offer is a method of making the transfer to the other computer's disc format almost instantaneous.

It is achieved by fitting an external drive to your computer; either a 5¼ inch drive for the PCW or a three inch drive for the PC. This in effect produces a hybrid – neither fish not fowl.

You can use the drive as a normal B-drive allowing you to save data to disc and even run programs. But with the correct software you can alter the format of the disc and save files that can then be read on the other machine.

This is particularly useful in an office environment where both PCs and PCWs are in use. Often the two types of machine can use the same programs: Protext, Wordstar, ScratchPad, Cracker or SuperCalc. As these programs usually store their data in the same way, that means that you can work on one machine, save the information on the external drive in the other machine's format, and then read the data files in the other machine, complete with layout and escape codes.

The simple answer

The 5¼ inch external is obviously the simplest answer for the dedicated PCW user. This fits relatively easily on to the PCW (about the same level of difficulty as a normal second drive upgrade anyway.) There is a switch on the back to change between 40 and 80 tracks (although in practice you will probably only need 40). The drive comes with software to allow you to format 5¼ inch discs in MS-DOS format. If you eventually succumb and change to a PC (note that we in 8000 Plus don't say "upgrade to a PC") you can even add it as a second drive to a single drive PC.

However as there seems to be a fixation with PCs nowadays, the chances are that an office manager may prefer to put an external three inch drive on a PC. Admittedly this does give a bit more flexibility – the PC can do one or two more things than the PCW.

By using a combination of software, you can read three-inch discs and even run some CP/M programs on the PC –

PC ⟷ PCW

No article on transferring information between PCW and PC would be complete without tackling the question of transferring data between computers along a cable. So here goes with one method that should work easily with files of up 64k.

Naturally if you are having to transfer information between the two a lot, an external drive would be more successful. But if not you can get away with investing in the cost of a length of 8 core cable, two female plugs, an PCW RS232 interface and a serial interface card on the PC (check in case the PC has this as standard). The RS232 is the box you stick on the expansion port on the back of your PCW to hook up to a printer or a modem. Well worth an investment of about £50.

If you're not technically-minded, you could buy a 'null modem lead' – a lead that has the wires crossed so that the input at one end is the output at the other. Don't try to use a printer lead as this certainly wouldn't work. Also make sure that you buy a lead with female plugs at either end. The serial lead ends in a sort of D-shaped arrangement with 25 connectors. The 'female' plug has 25 holes while the 'male' has 25 pins.

Then it is simply a matter of hooking up the two machines: fitting one end to the upper connector on the RS232 and sticking the other end in the connector on the right hand side of the base of the PC.

Getting it together

The first thing you have to do is set the PCW and the PC to the same setting for transfer. On the PCW you need the utility SETSIO.COM (you find it on your CP/M utility discs) in the A drive. Type in `SETSIO 1200 H OFF.`- or as we say in English – "Set the RS232 to transfer data at a rate of 120 characters per second (the famous baud rate) and turn Handshaking off (a method of checking between computers what is going on in the other one)". The PC has to have

K UNTO COMPUTER

Alec Rae shows you how to make them rap

well certainly more successfully than you could run a MS-DOS program on a PCW.

Pick a format

One piece of software that you will need is Uniform PC, a program that allows you to configure a PC drive in any of 260 different formats. This obviously gives you a lot of flexibility and the most obvious problem is ploughing your way through the pages of choices looking for what you want. As well as allowing PCWs to talk to PCs, it would mean that you could perhaps read files off discs for machines with famous old names like Kaypro, Televideo, Zenith or Osborne.

Uniform, in effect, sets the right format for any of your drives (for instance if you have other formats of 5½ inch discs) although its most obvious use is to format your external drive. You can get either the equivalent of an 8000 series A drive (173k capacity) or a B drive (the 9512 A drive – 706k). As is the case with the PCW, with the 706k drive you can read both single and double-sided discs but it can't write to double-sided discs.

On the other hand, it is not quite as easy as in the PCW because you have to reset the format using Uniform every time you change between the two types of disc. However the greater flexibility probably makes the 706k drive worth the extra £50. This normally costs nearly £70, but if you are buying an external drive you get it for only £50.

The CP/M PC

The last piece in the jig-saw is Unidos, a program that impersonates, or 'emulates' the CP/M operating system on the PC. Although this sounds a good idea it needs a careful look before you invest nearly £170 in it. You have to fit a Z80 card in the PC – not really a taxing task. But you do face one or two problems when you're setting up your PC.

Unidos gives you a wide choice of keyboards to choose from (21 to be exact) but the documentation is not over helpful when it comes to choosing the right one for you. For instance the one suitable for programs written for the PCW is option number 7 – Heath/Zenith – a fact not at all obvious from the documentation. This is because the software was written in America where they have hardly heard of Amstrads, and Timatic are now trying to get menus changed to reflect the different priorities.

Unidos is an ideal tool for people with software for old CP/M machines. The CP/M used is the 2.2 suitable for many programs but may not be able to handle many of the modern programs being written for the PCW nowadays. It would be well worthwhile checking in advance whether the CP/M software you have in mind will run on Unidos.

One major problem is the screen size. For instance the PCW screen size is 32x90 while the PC screen is only 24x80. Unless the CP/M program can be configured to handle the smaller screen size the display can be hopelessly messed up. Of course Amstrad CPC 6128 has the same screen size as the PC. Many CP/M programs are set up both for the 6128 and the PCW so you can be pretty sure these will not have screen display problems.

However most people interested in Unidos will probably have experience from the early days of personal computers and therefore will be well-equipped to tackle such problems. Unless you have a lot of old software, there are few CP/M programs that cannot be found in a more suitable form for the PC. These will certainly react more quickly and with fewer problems than the relatively sluggish CP/M emulations. EXIT

8 inch remix

Although this article is mainly aimed at transfer between PCWs and PCs, there obviously are computers using other sized discs. For instance 3½ inch discs are becoming very popular (most notably with the Apple Macintosh, the ST and the Amiga) and to cater for these owners, Timatic also offer a 3½-inch external disc drive. There is even an eight-inch drive for anyone who still uses eight-inch discs.

PPC plod

Unfortunately there's no easy way of hooking up your PPC and your PCW, short of buying an external 3½ inch drive and using Uniform. If you just want portable word processing look at a Cambridge Computers Z88, which can talk to your PCW as described in last October's 8000 Plus (issue 13).

PLUSES

- A quick and sensible method of transferring information between computers
- Uniform provides a vast range of formats that should cater for all needs

MINUSES

- Unidos cannot handle many more recent programs and faces problems with screen sizes.
- Unless you had a large library of old CP/M programs it would be cheaper and more sensible to buy a suitable PC program than try to use a CP/M package on the PC.

RANGE OF FEATURES	■■■■	EASE OF USE	■■
PERFOFMACE	■■■	DOCUMENTATION	■■

8000 PLUS VALUE VERDICT ■■■

the same setting so load MSDOS and then type `MODE COM1:1200,,8`.

Although it is possible to set the baud rate higher, 1200 is high enough a rate to ensure no mistakes.

You also need to have the utility PIP.COM on the M drive of the PCW. Again with the correct CP/M utility disc in the drive, type `PIP M:=A:PIP.COM` and thereafter you can use PIP at any time by just typing `M:PIP`.

From the PC

Say you want to transfer from the PC to the PCW; you obviously need the disc with the file to be transferred in the PC drive, and a formatted disc with enough space on it in the PCW. Let's assume the filename is BORING.TXT although it can be anything you want.

ON THE PCW

Type `M:PIP BORING.TXT=AUX:[E] [RETURN]` or "Take any information that comes through the RS232 and save it in a file called BORING.TXT. And by the way type the whole thing up on the screen so I can see what's happening".

ON THE PC

Type `COPY BORING.TXT AUX/A [RETURN]` or "Take the file BORING.TXT and bung it through the serial port."

Once the file has been transferred the PCW will save it on disc.

From the PCW

Again put the disc with the file in A drive and the blank disc in the PC.

ON THE PC

Type `COPY AUX BORING.TXT [RETURN]` or "Be ready for some interesting news through your serial port. Be sure to save all information to file."

ON THE PCW

Type `M:PIP AUX:=BORING.TXT,EOF:[E] [RETURN]` or "Send the file through the RS232 until the end of the file and then stop. And print it up on the screen again so I can see what's happening."

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SMALL TALK

40 years is a long time in computing – Ben Taylor rounds off the story of computers with a look at the microcomputer revolution

As with many aspects of life, Hollywood and the film industry is a fair barometer of progress. If you look at any film made before the mid-70s, whenever a computer was mentioned the camera would cut to a room full of white coats, flashing multicoloured lights and clacking printers – The Ipcress File and its sequels being prime examples. By the turn of the decade things had changed. Films like War Games showed the image of a computer as a fresh-faced teenager hunched over a desk with a green screened machine, threatening global security by cracking NATO's inexplicably trivial computer security system. What happened?

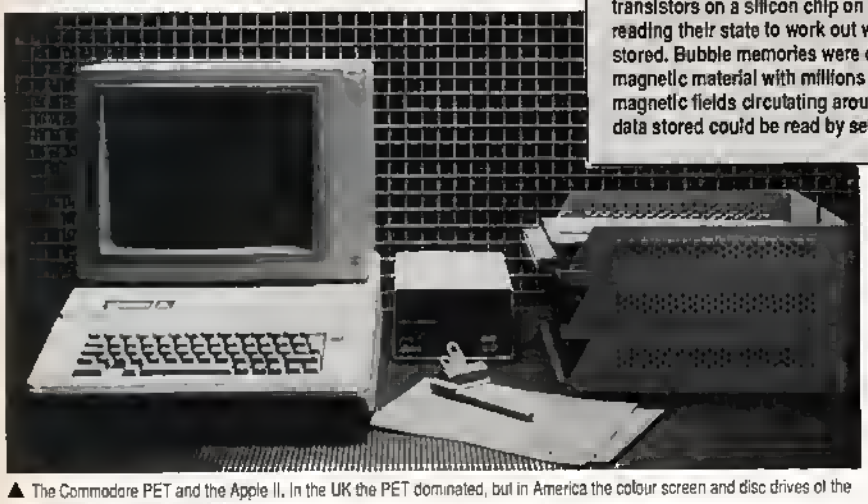
Well, microprocessors happened. By the middle of the 1970s engineers had discovered how to put many thousands of transistors onto a single piece of Silicon, effectively manufacturing a computer on a chip. Because the material costs for these microprocessors were so low, private individuals could afford to buy them. Instead of a computer costing £100,000 minimum, for £10 you could buy the heart of the computer, and scratch around to find some memory chips, a keyboard and a modulator to send the output to a domestic TV. Of course, you needed considerable technical skill to make a useful computer given only the basic microprocessor chip, but the active band of home electronics enthusiasts gladly provided that.

Clive to the rescue

The story of the development of home computers, at least in the UK, begins with a familiar name – Clive Sinclair. In 1977 Uncle Clive was trading under the name of Science of Cambridge, since his previous company, Sinclair Radionics, had had a mishap with a cash flow situation. He was already famous for producing the world's first digital wristwatch (the 'Black Watch' – to save on battery wear the display was blank and you had to press a button to see the time), and his first true foray into the computer field was the Science of Cambridge MK14.

Those of you who know anything about machine code will know that everything is done in hexadecimal numbers – a typical program reads `D3 FF 5A C3` and so on. The keyboard on the MK14 only had 16 keys, one for each hex digit, so there was none of this fancy programming in BASIC rubbish. The MK14 was firmly a hobbyists' tool for people who wanted to learn to program a microprocessor; you couldn't do anything with it – you certainly couldn't do any word processing as there was no typewriter keyboard. For a basic £46.55 (including 8% VAT – remember 8% VAT?) the MK14 had 256 bytes of RAM and a calculator-type display capable of showing 8 characters at a time. Unless you paid extra you couldn't even save programs you had written, they had to be retyped everytime you turned the machine on. And it sold in thousands.

The MK14 was a typical British computer. It was weird and wonderful and designed for the hacker to get his teeth into, but of no real use except as a hobby. Another British computer, the Nascom 1, continued this fine tradition with a package costing £165 and offering the unheard of luxuries of a QWERTY typewriter keyboard, a TV video output and a cassette interface for saving programs on. The basic memory supplied was a massive 2k, but it was still a machine code tool, and did not at first have any BASIC language for programming.



▲ The Commodore PET and the Apple II. In the UK the PET dominated, but in America the colour screen and disc drives of the Apple appealed to businesses more.

Transatlantic invasion

Many people have praised Alan Sugar for pioneering the one-plug computer concept, meaning that Amstrad machines tend to have monitor, processor and cassette/disc powered from the same lead, so making the package clean and appealing to the ordinary businessman.

In fact, the most significant computer of the 70s had

Hubble, bubble

Memory chips were hideously expensive in the 1970s, which is why most computers came with 4k or 8k of RAM at the most. There was a curious interlude in about 1979 when a new storage medium called 'Bubble memories' arrived to solve everyone's problems.

Ordinary memory chips work by turning transistors on a silicon chip on and off, and reading their state to work out what data is stored. Bubble memories were chunks of magnetic material with millions of tiny magnetic fields circulating around, and the data stored could be read by seeing which way the polarisations on the magnetic fields was.

For a few hundred pounds you could buy a half-megabyte Bubble memory chip, which sounded like superb value when 32k of ordinary RAM cost about the same. However, in the end Bubble memories died because they were agonisingly slow; it took several milliseconds to retrieve each byte of data from store, and so they ran no faster than a modem floppy disc. For fast microprocessors, Bubble memories were useless.

A block off the old chip

The Nascom 1, launched in 1978, was built around a microprocessor called the Z80. This is the very same chip which Amstrad still use ten years later for their CPC and PCW computers. No-one calls Alan Sugar technically daring and gets away with it.

Moot point

Normally a collection of several integrated circuits is known as an 'array'. However, when talking about a network of interconnected transputers, the streetwise engineer calls it a 'farm'.

The mighty fallen

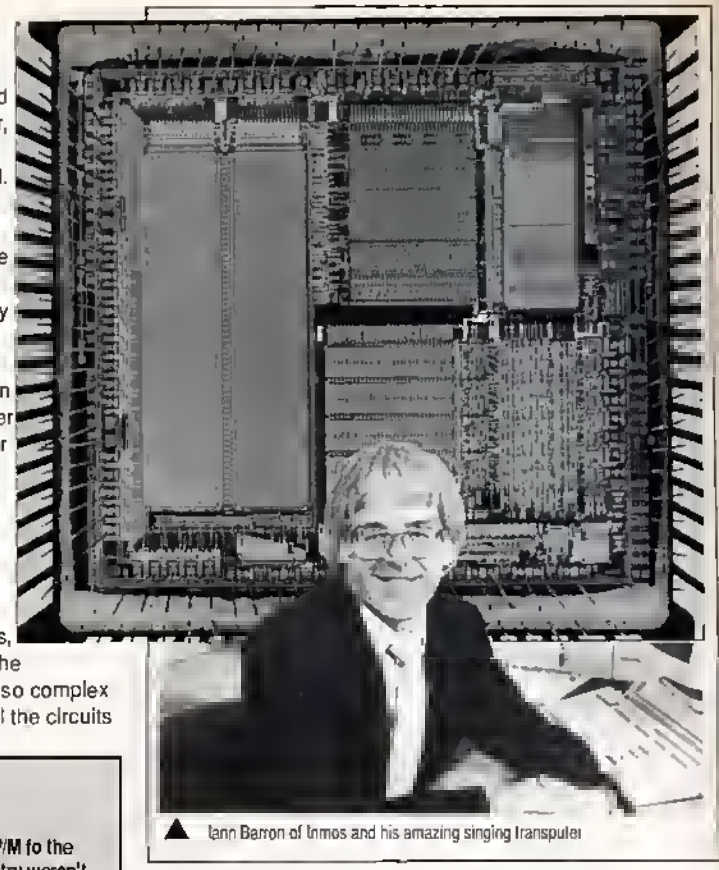
When you look back over the British home computer revolution, one name crops up over and over again – Clive Sinclair. His MK14, ZX80, ZX81, Spectrum and QL all broke new ground in design and price, and the Spectrum is still the best-selling games computer today. In 1986, after the failure of his business computer, the QL, and the infamous C5 electric car, Amstrad bought Sinclair's entire product range and trade name for a mere £5 million.

exactly this design philosophy. This was the Commodore PET ('Personal Electronic Transactor' – you can tell it's American), which had a cassette recorder, typewriter keyboard and 40 column by 25 row proper green video monitor, all housed in a sturdy metal case for real office use. Prices began at about £500 with 8k or RAM.

In the business sector, the PET, and its other American rival, the Apple II, dominated the late Seventies scene. The need for fast mass storage soon meant that all computers had floppy discs, and for a brief while from 1979 to 1981 the floppy disk-based CP/M reigned supreme as the industry standard computer system, on such memorable machines as the Kaypro. However, in 1981 IBM decided to enter the personal computer market with its PC, and that was really that as far as business computing went. They instantly captured the major part of the business sector, and almost all commercial packages today run under the rapidly ageing 1981 IBM standard.

The face of the future?

After all the long histories of American inventions, it's nice to finish on a British note – the story of the transputer. By 1981 microprocessor design was so complex that it was becoming increasingly difficult to fit all the circuits onto a single silicon chip. A radical rethink of microprocessor architecture came about, known as 'RISC' architecture (for 'Reduced Instruction Set Computing'), which drastically cut the number of components needed on a microprocessor.



▲ Iann Barron of Inmos and his amazing singing transputer

Iann Barron (the double-n on Iann isn't a misprint) at Bristol-based Inmos began to ponder what to do with the extra space on the silicon chip that had now been freed by the reduced circuitry, and he decided to put some communications circuits there to enable two or more such chips to talk to one another. This turned out to be a stroke of genius, for now you could take several of these 'transputer' chips and interconnect them so that they all worked in parallel. In theory, 10 transputer chips together would work 10 times as fast as a single one, and 100 chips 100 times as fast.

Fortunately, Inmos thought to patent their transputer, although they've made no secret of their design details. The first transputer chip, the T414, was sold in mid-1986, and already virtually every major computer manufacturer in the world is developing new computers based around it or its successor, the T800. The first transputer-based computer on sale looks likely to be Atari's 'Abaq' (reportedly a trendy play on the word Abacus) with up to 13 linked transputer processors. Costing between £3,000 and £5,000, if it lives up to its specification the Abaq will run at 13.5 million instructions per second, faster than the current top-of-the-range IBM mainframe computer. Although Atari are an American company, the design for the Abaq is being done in England by Perihelion Hardware of Cambridge.

Looking forward, the future of computing seems to lie increasingly with ultra-powerful personal computers. Until recently, companies would buy a multi-million pound central computer for all staff to share, but now it makes more sense to give everybody a personal computer and link them all in a network to share files and general data. Computer manufacturers dedicated to selling massive mainframes could be in for a lean time of the 1990s.

EXIT

The CP/M story

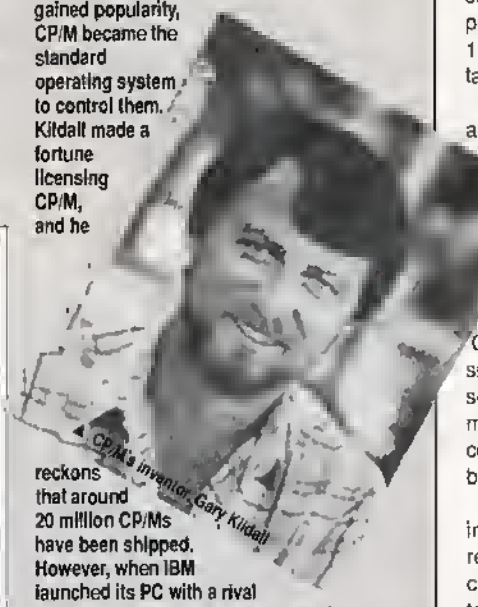
Even the most ardent LocoScript fans can't have failed to notice that the PCW runs an operating system for its business software called CP/M. This is by no means an Amstrad invention, and the roots of CP/M stretch back to 1972.

In 1972 three things happened. First, the American disk manufacturers discovered how to make portable floppy disk drives, whereas before mass disk storage had to be done on large expensive hard disks. Second, an American student called Gary Kildall acquired a manual for the Intel 4004 microprocessor, one of the earliest ever models. And thirdly, Richard M. Nixon resigned as U.S. President.

In 1973, Kildall managed to get a floppy disk drive to work with his homebrew microcomputer, and began trying to work out how to store and retrieve data files. By this time he was working with Intel's 8080 microprocessor, and Kildall chose the rather boring name for his system of 'Control Program for Microcomputers', or CP/M for short.

His first attempts to market CP/M to the nascent American computer industry weren't that successful. Its first commercial use was in 1975 as the guts behind a machine to calculate astrological charts from any person's birthdate. However, Kildall soon took the plunge, gave up his full-time job and founded "Intergalactic Digital Research Inc." to market CP/M. (The "Intergalactic" was rapidly dropped as not having quite the right image!) To help sell CP/M Kildall gave away a few utilities such as a file copier called the Peripheral Interchange Program – or PIP as we all now know and love it.

As floppy disks dropped in price and gained popularity, CP/M became the standard operating system to control them. Kildall made a fortune licensing CP/M, and he reckons that around 20 million CP/Ms have been shipped. However, when IBM launched its PC with a rival company's operating system, Digital Research's CP/M went into decline. Today the world revolves around IBM and MS-DOS.



▲ CP/M's inventor, Gary Kildall

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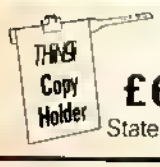

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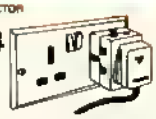

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TUTORIAL

NAIL DOWN THOSE FILES

More power to your programming elbow: create and edit files in BASIC

If you've been following the BASIC series you can now write very sophisticated programs – with one problem. As yet we haven't mentioned files, so you can't save the results of a program to a file for future use, or work on data already stored in a file somewhere, etc. And 99.9% of useful programs require the ability to handle information stored in files (count words in a text file, add or edit items in a name-and-address file, and so on).

A file is created in BASIC by an OPEN statement. You can create a file ERASE.ME by the statement `OPEN "O",1,"ERASE.ME"`. That "O" is a signal to BASIC that some of the subsequent output from this program will be going into a file called ERASE.ME. The '1' is there as a sort of temporary reference number for ERASE.ME – if you're working with more than one file, whenever you talk about file '1' then BASIC knows you mean ERASE.ME and not DELETE.ME or DESTROY.ME or any of the other files floating around.

```
run
Enter name and number (type $ to finish):
? Art J. Krantzenstein III Jr 01-974 6356
Enter name and number (type $ to finish):
? Arthur Smith 566473
Enter name and number (type $ to finish):
? $
Ok
```

▲ Creating your file

```
type phone.bok
Art J. Krantzenstein III Jr 01-974 6356
Arthur Smith 566473
Ok
```

▲ Checking it's actually worked

To put something in this file, you use PRINT, but in a special way, using a hash (#) sign. The following listing should clarify things.

```
10 OPEN "O",1,"ERASE.ME"
20 PRINT "This will appear on screen"
30 PRINT #1,"This will go into the file"
40 CLOSE
```

If you run this listing, line 10 creates the file, line 20 prints to the screen but not the file, and line 30 to the file but not the screen – note that reference number 1 preceded by the hash mark. That last statement is essential – you must CLOSE a file before a program finishes. It puts a 'the end' marker in the file so that when you subsequently read data from it, BASIC knows when to stop.

Do a directory by typing DIR, and you'll see that an extra file called ERASE.ME has been created. Typing TYPE ERASE.ME shows the contents of the file on the screen, ie. the message 'This will go into the file'. You can erase the file by typing ERA ERASE.ME – conveniently, DIR TYPE and ERA work within BASIC and you don't have to go back to CP/M and that A> prompt.

Phoney list

So, you want to create and keep a telephone number list. It must of course be saved to disc, and it must be easily updatable. Plus you'll want to be able to print it out.

You need three programs: the first to create the file, the second to print out the file, the third to display and amend it. The first is easy. All you'll do is create a file as above, type in all the telephone numbers you want, then close it. This is a sequential file (see the box) so all the information will be recorded in a continuous stream; to keep things organised we'll keep one entry to a line.

```
10 OPEN "O",1,"PHONE.BOK"
20 PRINT "Enter name and number (type $ to finish):" : INPUT a$
30 IF a$<>"$" THEN PRINT #1,a$ : GOTO 20
40 CLOSE
```

On running this program, you're prompted for a name and

```
run "add
New entry ($ to finish):
? Davina de la Rue 968155
New entry ($ to finish):
? $
Ok
type phone.bok
Art J. Krantzenstein III Jr 01-974 6356
Arthur Smith 566473
Davina de la Rue 968155
Ok
```

▲ The adding routine – yes, it really works

File facts

There are two types of file, sequential and random access files. To picture the difference, think of a cassette tape and a CD. If you want to find a particular track on an album on cassette, you have to go forward through the entire tape until you get to the right bit. On the CD, you can just jump to the fifth track, say, immediately.

Suppose you have a file of names and addresses, and you want to find one and alter the address; if stored as a sequential file, every item of text follows on immediately from its predecessor. Hence to do the alteration you have to read into a new file everything up to the address to be changed, then write in the new address, then read in everything after the address from the old file into this new file, then save the new file and erase the old file. Text files in word processors work in this laborious way.

In random access files, it's much easier. Every name and address takes up the same amount of space, and you keep an index of what goes where. It's like an address book with one entry to a page and an alphabetical index at the back; to edit an address, just look up the name in the index, go straight to the required page, and change just that page. You can leave all the others untouched. The problem is that you have to set up all these indexes and handling random access files is generally much more complicated than sequential files.

number. Type it ending with [RETURN]; you will be asked for more entries until you type a dollar sign to finish. (Line 30 does this). Now if you type `TYPE PHONE.BOK` you should see the entries you typed in printed to screen.

The file PHONE.BOK will be on the 'default drive', ie. the one you're currently using, though you can make sure it's put on somewhere else by putting the name of the drive at the front of the name – `OPEN "O",1,"B:PHONE.BOK"` and so on. Check it's there with a `DIR B:`.

If you want to print out all your entries onto paper, you just need to read the entries from PHONE.BOK and print them out with LPRINT. Now, the instruction you give to BASIC to open a file you want to read from is slightly different from the instruction telling it you want to open a file for writing to. To write something in a file you must have opened it with "O" for output (OPEN "O",1,"PHONE.BOK"); to read something from a file you must have opened it with "I" (OPEN "I",1,"PHONE.BOK").

EOF is a very important function. It stands for 'end of file' and is followed by the reference number of a file. EOF(1) for example will be true if the end of file 1 has been reached and false if it hasn't. In conjunction with the WHILE statement it is often used in handling sequential files like this.

While U wait

To picture the action of the WHILE...WEND statement, think of the instructions at a level crossing:

```
10 WHILE (the lights flash)
20 (wait)
30 WEND
40 (proceed)
```

On getting to a level crossing, you look to see if the lights are flashing (10). If they are, you wait (20) for a bit. After waiting you then look again to see if they're still flashing – ie. the WEND sends you back up to line 10. If they're still flashing, you wait again, and so on, until the lights are not flashing; then you don't wait, but proceed, ie. continue from line 40.

The following listing will read the entries in your phone book and print it:

```
10 OPEN "I",1,"PHONE.BOK"
20 WHILE NOT EOF(1) : INPUT #1,name$ : LPRINT
name$
30 WEND
40 CLOSE
```

So, what the above listing does is to keep inputting one name at a time from the file and printing it, repeating this cycle until the end of the file has been reached. When that happens it closes the file.

Great. But it would be nice to do something with this data. First a routine to add data to your file. You can't just stick it on the end – you need to first open the file PHONE.BOK for reading (`OPEN "I",2,"PHONE.BOK"`) then for writing new entries to (`OPEN "O",1, "PHONE.BOK"`), read in all the old entries, write them to the new file, close the old file, add the new entries, then close the new file. As hinted at the start, those reference numbers must be different in the two statements, or else BASIC will get its reading and writing mixed up. Again that WHILE statement is used.

```
10 OPEN "I",2,"PHONE.BOK" : OPEN
"O",1,"PHONE.BOK"
20 WHILE NOT EOF(2) : INPUT #2,entry$ : PRINT
#1,entry$ : WEND
30 CLOSE 2
40 PRINT "New entry ($ to finish):" : INPUT new$
50 IF new$<>"$" THEN PRINT #1,new$ : GOTO 40
60 CLOSE
```

That CLOSE at the end is again very necessary and closes all the files being worked on. If you just want to close one of the files you can `CLOSE 1` or `CLOSE 2` as in line 30.

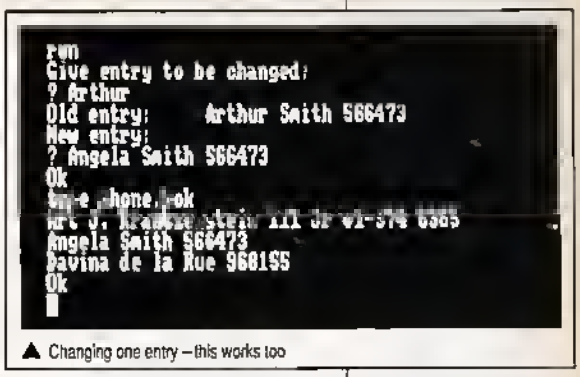
Plus ça change

To amend stuff already in a file, you input items one by one from the old and check each one to see if it needs updating. If it's OK you write it to the new file, otherwise write the new version of that entry. This listing asks you for an entry to be amended and if the string you give it occurs in any entry in the old file, it asks you for the new version to be recorded. Line 40 makes sure that 'entry$' is amended if necessary and line 50 prints 'entry$' to the new phone book file.

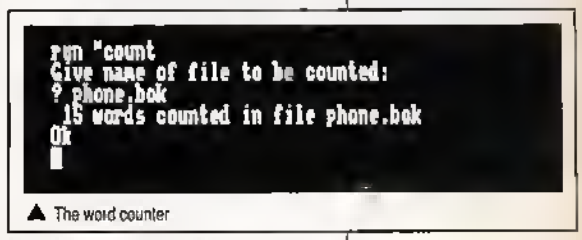
```
10 OPEN "I",2,"PHONE.BOK" : OPEN
"O",1,"PHONE.BOK"
20 PRINT "Give entry to be changed:" : INPUT
changeme$
30 WHILE NOT EOF(2) : INPUT #2, entry$
40 IF INSTR(entry$,changeme$)>0 THEN PRINT "Old
entry:",ENTRY$ : PRINT "New entry:" : INPUT
entry$
50 PRINT #1,entry$
60 WEND
70 CLOSE
```

Note that because of the way INSTR works if you give `Fred` as the entry to be changed, both `Fred 667758` and `Nina and Frederick 01-997 6637` will be amended, but `FRED 667758` and `ALFRED THE GREAT 718093` will not.

EXIT



▲ Changing one entry – this works too



▲ The word counter

String 'em up

INSTR is one of those 'string functions' mentioned a while ago; you give it two strings and it tells you at which position ....the second occurs in the first. For example, if a$="wombat", INSTR(a$,"bat") is 4, INSTR(a$,"womb") is 1 and INSTR(a$,"x") is 0

Count yourself in

In all these examples, the name of the file to be worked on is contained in the program. But what if you might want to work with different files – for example, you want a program to do a word count on file X? You can just OPEN a file whose name is contained in a variable, for example:

```
10 PRINT "Give name of file to be
counted:" : INPUT file$
20 OPEN "I",1,file$
```

etc. will ask you for the name of a file and whatever you type in, the program will look for that file and open it for reading from.

Now something for all you frustrated LocoScripting writers. Elderly readers may remember when we first published a word count listing back in Issue 1. Now you can write your own. This one uses the command LINE INPUT which, surprise surprise, inputs a whole line at a time, ie. it reads everything up to the next [RETURN]. The command INPUT only goes as far as, for example, a comma or a [RETURN]. The variable inword% is used as a flag – if, as it works its way through the file, the program is currently inside a word, inword% is –1, 'true'; when it sees a space but inword% is still true, the program knows it must just have come out of a word, and increases the word count in word% by 1. Then it sets inword% to 0, or false.

```
10 PRINT "Give name of file to be
counted:" : INPUT name$
20 OPEN "I",1,name$
30 inword%=0 : line%=line%+1
40 WHILE NOT EOF(1) : LINE INPUT
#1,line$
50 FOR i=1 to LEN(line$)
60 c$=MID$(line$,i,1)
70 IF c$=" " AND inword%=-1 THEN
word%=word%+1 : inword%=0
80 IF c$<>" " THEN inword%=-1
90 NEXT i
100 IF inword%=-1 THEN word%=word%+1
110 WEND
120 PRINT word%; "words counted in file
"; name$
130 CLOSE
```

The word counter here will only count simple text files, ie. ASCII files. LocoScript documents must be converted to ASCII – see the manual – and put into group 0 before you count them. To count the words in a Loco document directly you need a bit of clever decoding – see 8000 Plus Issue 14 p64.

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Travelling in time, as any commuter will tell you, is an exciting phenomenon. For instance with British Rail, you can arrive at your destination five hours later than you should have done. If the prospect of travelling back and forth in time is something that excites you then you should find this trilogy of adventures from Level 9 right up your time warp. But be warned. Time travel can seriously threaten your insanity.

In the first game (all three come on the one disc), Lords of Time, world history itself is under threat from a bunch of Dr Who clones, or Timelords as they prefer to be called. It is their intention to distort time and eternity to make it totally unrecognisable. Of course, this is a monstrous plan. After all, where would we be without 1066, Paschendale or Vietnam? I mean, history would be unthinkable!

To ensure, therefore, that our cherished history books remain suitably xenophobic, racist and sexist pieces of propaganda, you must travel through time's nine zones. Your task is to obtain nine objects – each marked with a sign of the holy hourglass – and hurl them into the cauldron at the end of time. Just to make life interesting (and increase your score) there are various treasures to collect along the way.

Travel is by clock of course which, though a little cramped, provides maximum privacy. There are some nice touches in this game – for example, the occasional déja vu effect or the narcissus flower that longs to see his true reflection.

Once in a Red Moon

Red Moon, the second adventure is not, as you might think, about the Militant Tendency in exile. Instead it's a kind of allegory on the recent demise of the Labour Party. The Red Moon Crystal, the source of power, has been lost. As a kind of Neil Kinnock surrogate, it's your task to locate the crystal and restore the world to its former magik. Various spells are at your disposal which, unlike most of the opposition leader's speeches, are brief and to the point.

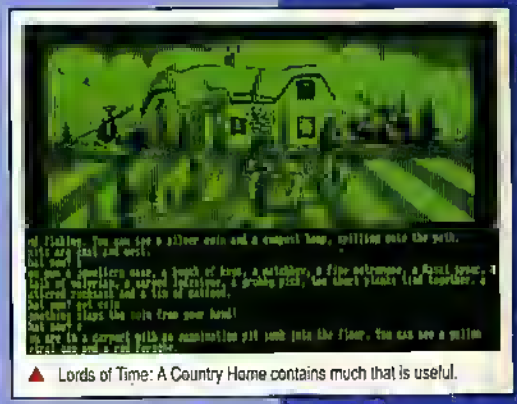
The locations in this adventure are in the classic mould with a castle, temple and tower to name but a few. Interaction tends to be physical rather than verbal in nature. For example, the rather large blacksmith – the Giant Haystacks of adventures – attacks without reason and will certainly test your courage. This all adds to the game's very strong atmosphere provided by the detailed and well-written text.

Magik inflation

The third game, The Price of Magik, takes the story one step further. This time, the guardian of the crystal goes bananas and actually steals it, hoping that it will give him eternal life. Your task is naturally to get the crystal back. Much of the action here takes place in a mansion, though before you can progress, there are a few essential clues to discover in the garden. A novel feature in this game is the HYP (hypnosis) spell which gives you power over other characters – something I'm told Mrs Thatcher employs frequently – though this is limited to one creature at a time.

Again, interaction in the game tends to be more entertaining than subtle, and perhaps a little too realistic for my liking (such as the tussle with the giant slug which reminded me of a recent encounter I had with a tax inspector.) The light source is provided by rubbing one's eyes with a certain flower. This is interesting because too many adventures (including the first two of this trilogy) rely on the old clichés of lamp or candle.

Additionally, some adventures fall into the trap of providing too many difficult puzzles at the outset, something which can put off the average adventurer straightaway. Commendably, none of these games make that mistake and where puzzles are difficult, hints are sometimes provided in the text itself.

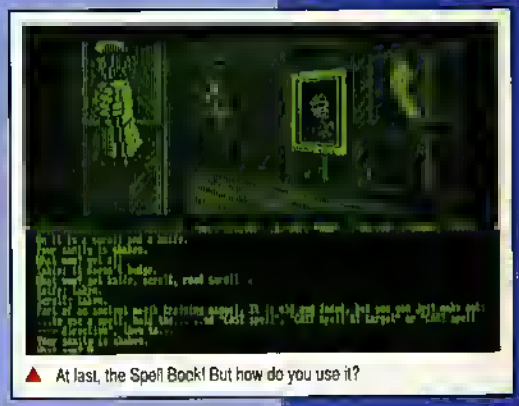


▲ Lords of Time: A Country Home contains much that is useful.

Let me try again

These games can be played in any order and come with the usual range of commands, including BRIEF/VERBOSE, RAM save (which means that you don't have to swap disks in the middle of the game) and UNDO which makes good any terminal mistakes.

The digitised pictures accompanying each game are excellent. Not only do they enhance the atmosphere created by the text but (unlike some other adventures) they also load very quickly. This speed is important as the graphics in some adventures are irritatingly slow to load.



▲ At last, the Spell Book! But how do you use it?

Overall, Time and Magik is an excellent package. If you don't regard three classic adventures for the price of one value for money then you're a whingeing Nacod!

PLUSES
- Interesting scenarios
- Strong atmosphere
- Excellent playguide
- Well-executed pictures
- Interesting puzzles

MINUSES
- Some of the interaction can get a little monotonous

ATMOSPHERE	■■■■■	INTERACTION	■■■■▪
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RUNES OF POWER

LANGFORD

WASTED

A page in the company of author and PCW pundit David Langford

More and more writers seem to be bashing out fantasy trilogies these days. More and more writers ere switching trom typewriters to computer word processors. Could the facts be related? All right, I know, it isn't logical to insist on a connection... there are equally good statistical arguments which "prove" that television causes insanity and medical care causes cancer. (TV set purchases and the number ot mental cases both rise together with the ever-swelling population; a good health service keeps more people alive to suffer the afflictions of old age; never buy a used graph from a statistician.)

Nevertheless, you can fudge up some interesting parellels between the computer boom and the horrible proliferation ot multi-volume fantasy epics. I'm pretty sick of the latter: there are altogether too many derivative efforts called things like *Dictator of the Circlets* (successor to *Emperor of the Annuli, Chieftain of the Toroids* and *Czar of the Hoops*), divided into three dreadfully reminiscent volumes, all of which I then have to review.

One of the most tamiliar tantasy plotlines goes like this. Pat Nurd is a no-account but ever so sympathetic young filing clerk from our world, or stablehand's apprentice in the book's imaginary world, who steps through a magic doorway and is Pitchforked Into Adventure. Helpless at first in the menacing fantasy wilderness, Pat soon learns a few tricks and spells which control the magical fabric of the universe... and with the help ot grimoires and perhaps a wise old mentor, struggles to learn more. By the middle of book three, this formerly inadequate stable clerk is a Mage who knows the True Names of things and can toss off Words of Power to command the forces of nature. It certainly beats working for a living.

(Greg Bear's novels *The Infinity Concerto* and *The Serpent Mage* offer one of the more intelligent recent versions ot this rags-to-runes story.)

The real world version

Let's run through that tamiliar scenario again. Pat Nurd is a no-account but ever so aspiring young writer, who steps through the enchanted door of the computer shop and is pitchforked into a strange new world. Helpless at first in the menacing silicon wilderness, Pat soon learns a few tricks and commands which control the awesome fabric of the operating system... and with the help of computer magazines and perhaps a local user group, struggles to learn more. By the time Pat should have finished book three ot the currenf contract, this formerly inadequate hack is a Power User who knows three computer languages and can write programs to do all sorts of fun things.

Of course, Pat might not be doing so much actual writing....

If you accept the common picture of a writer as a mildly ineffectual person whose fantasies are acted out on paper, there's definitely a trap waiting here for the unwary. Behind the computer screen lies a strange and different space, a land which just like the average fantasy universe obeys new but suspiciously simple rules: rules that you can learn. All the sentences of its language are in the Imperative – "Do this, do that, for I command that it should be so" – and if they're phrased correctly they will always be obeyed. Gosh, what an ego trip. (Of course you have to watch it when invoking powers like the Demon Assembler – one misspelling, and this fiend can burst free of the pentacle to wreak havoc on your naked, vulnerable disk directory.)

Really?

We'd better not push this analogy too tar. The general point is that, just like the standard unfrained-wizard-makes-good plot, tinkering with computers can pamper one's little power fantasies. Issuing commands is fun. Getting a program to work is so much more definite and definable an achievement than bashing out enother thousand words ot prose which might well have to be rewritten anyway.

All power corrupts, they say, and the absolute power we wield only In tantasies and programming... corrupts absolutely, like Tolkien's Ring. You can fiddle round obsessively with a prime-number program or a deeply useless means of detecting split infinitives: you can feel you're doing things, achieving things, when the end result is a re-inventing of products rather less usetul than a square wheel. Needless to say, this kind of skewed obsession with what's supposed to be a writing tool is not necessarily all that good for the writer.

Readers, this is no empty theorizing. Take pity on the neurotic, obsessed wreck which used to be a novelist called David Langford. The bytes have got to my brain cells. I've become a software company but it's a year or more since I actually wrote a book. Even if I can switch the creativity Interface module back to writing mode, there is the ghastly fear that I'll end up producing a heroic fantasy trilogy, *Quest of the Silicon Mage*, in which the scorned hero discovers his ability to program the universe in Pascal, and....

EXIT

Semantics corner

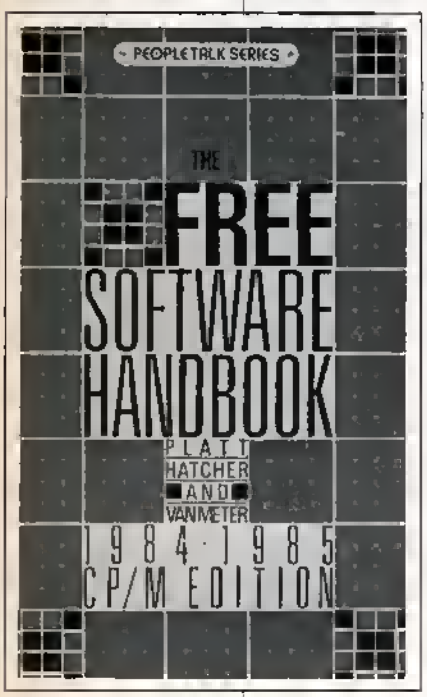
When is a piece of add-on software for LocoScript not a piece of LocoScript add-on software? The difference is that the first description is ideologically OK for anyone to use, while the second, according to Locomotive Software's eager and sharp-toothed lawyers, constitutes an attempt to defraud the public by implying that one's add-on program is written or approved by Locomotive themselves. It might sound daft, but be warned: lawyers have this magic power to see evil where others can't. I myself have utterly foresworn and abjured the marketing of LocoScript add-on software, and am nervously confining myself to the completely different field of add-on software for LocoScript.

FREE – FOR A FEE

Adrian Wilkins looks at free software you actually pay for

We are all a little tired of marketing adages such as "Don't miss our FREE offer", "Pay No Money Now (we'll make sure you'll pay lots later)", etc. Where's the catch, I hear you say. Now here's an interesting slant: a paperback book which you actually pay for! Seventeen dollars and ninety-five cents in fact, assuming you carry such currency in your back pocket.

In the year 14 BA (before Amstrad), or half of eternity ago, there were – surprisingly – a few other microcomputer manufacturers in existence. One of these was Kaypro. In the States, Kaypro did what Alan Sugar is doing today in Britain and Europe. Historians will tell you that a high proportion of PD software came into being because of Kaypro and the following they achieved. As did the Free Software Handbook.



Written by Gregory Platt, Patricia Hatcher and Blake van Meter – three American veterans of the 8-bit computers – and published by Peopletalk, the Free Software Handbook is a compendium of public domain software for CP/M computers, some of it already covered in these pages, others not. A bargain indeed, running to over 300 pages. Useful background information, a whole host of games to pick your wits against (Adventure, Chess, Golf, Racing, Star Trek, Lunar Module, etc), utilities galore, printing programs to put Robert Maxwell to shame, a special section for thoroughbred (and would be) hackers, and more.

Oh, and I nearly forgot to mention, you receive 3 double sided disks with every purchase. No, not blank ones – they contain all the software described in the book. Free!

Dropping catches

Is there a catch? Well, a few, actually. Firstly you will have to beg, borrow, or steal MBASIC or OBASIC if you intend to use the games programs – Locomotive's MALLARD BASIC is rather more modern than these, although it through 8000 Plus you have learned how to program in BASIC you stand a good chance of converting them yourself.

Be a little cautious using the disc repair and file undelete utilities with your PCW's B drive – B disk files are organised in 2k block quanta and not all early CP/M software performs correctly with these.

You will need to hack the communications program provided because of hardware differences between the Kaypro and PCW, and you might be better advised to buy one of the comms programs specifically tailored to your machine, such as were reviewed here a few months back.

Although the FSH offers brilliant value overall, there are a few disappointments with the Hackers chapter: a number of the supplied programs are effectively redundant on the PCW, since Amstrad supply CP/M Plus (synonymous with CP/M version 3). Thus on your Amstrad disk side 3 (the CP/M Programming Utilities) you will already find DUMP.COM, so you don't have any use for IDUMP; you can already divert console or printer output to a disk file using PUT.COM, so I/O-CAP is superfluous, and most of the features of EZCPR are built-in with CP/M Plus anyway, such as redefining devices, disk and directory search paths, password security, and HELP.

One offering that particularly caught my eye is UNSPOOL.COM – a program that once loaded sits invisibly in the TPA and prints a file while you continue to use the PCW for something else. However, even with this there is a drawback – UNSPOOL relies on the printer buffer to keep the printer active, only topping this up while you are at the A> prompt. So if you run a lengthy program the printer soon stops, continuing only when you next return to CP/M.

As with all things in life, you pays yer money and you takes yer pick.

The Free Software handbook is distributed in the UK by Davis /Rubin (0386 853610) for £39.95
ISBN 0-915907-07-0

EXIT

● *PDSL's address is Winscombe House, Beacon Road, Crowborough, Sussex, TN6 1UL. Their telephone number is 08926 63298.*

Creme de la creme

As this month sees the last of our present series on Public Domain software, here is a brief recap of the pick of the bunch.

Database	DBQ (Issue 12, Sept 87) from PDSL	Disc repair	DU (Issue 10, July 87) from PDSL
Comms	MEX (Issue 19, April 88) from PDSL or Advantage	File Utilities	NULU, NSWP (Issue 18, March 88) from PDSL
Artificial Intelligence	LISP (Issue 15, Dec 87) from the CP/M user group	Games	The Free Software Handbook (this issue, see above)

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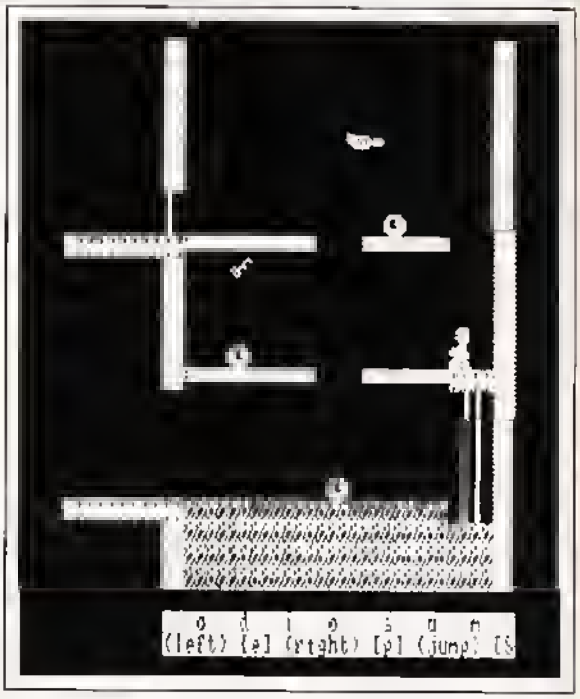
LISTINGS

Be amazed by the graphic details in this Arcade game from Mallard BASIC

ODIOSUM

by Richard Hopkins



O K. It's long and it looks pretty complicated. But this little game has the best graphics you've seen since you put your Spectrum ZX in the cupboard. Well, at least it's the best you've seen in Mallard Basic.

The idea is not entirely new. There were, at the last count, two or three million of these maze type games involving a little character climbing up the screen, jumping over objects which inexplicably kill him if he touches them. But you don't get many in Mallard Basic.

The strength of the game is in the graphics which are surprisingly good. This is achieved by redefining a number of characters and then combining them to make up the man and the maze. Also note the method of blanking the screen until the screen is built up (line 470 and line 580).

If you typed in the handfont program in December edition you will be at least part of the way there. But instead of

Give us a break

There are times when we can't make life really simple for you and some lines actually get too long for our PCW printer. Just remember not to press [RETURN] if the line wraps over to the next line. Keep going till the end of the line of BASIC before [RETURN]ing. And don't expect the line breaks to come at the same place as they do on your screen.

This is also a time when the checksum program printed regularly in 8000 Plus really comes in useful. Having a check number at the end of each line to help you find mistakes comes in really useful – especially for those DATA lines. If you haven't typed it in this might be a good time.

```
10 MEMORY &HBFFE: FOR hex=&HC07D TO &HC098: READ pk: POKE hex,pk: NEXT hex                1B40
20 DATA 243,62,129,211,241,62,13D,211,242,175,95,103,22,184,58,153,192,111,41,41        110D
30 DATA 41,25,17,154,192,235,1,8,D,237,176,62,133,211,241,62,134,211,242,251,201        11DF
40 FOR char=160 TO 191: POKE &HC099,char                                                DD01
5D FOR row=1 TO 8:READ binary(row):POKE &HC099+row, (binary(row)):NEXT row              1C70
60 cl=&HC070: CALL cl: NEXT char                                                        DAE8
70 DATA D,63,63,60,63,63,15,15,0,192,240,192,240,192,0,192                              DD1C
8D DATA 63,255,255,15,63,255,252,255,240,240,60,204,240,60,252,63                       0E82
90 DATA 63,255,255,63,63,63,63,63,240,240,240,240,192,D,0,192                           0D32
100 DATA D,3,15,3,15,3,0,3,0,252,252,60,252,252,240,240                                 0C01
110 DATA 15,15,6D,51,15,60,63,252,252,255,255,24D,252,255,63,255                        0E72
120 DATA 15,15,15,15,3,0,0,3,252,255,255,252,252,252,252,252                            0CEE
130 DATA 255,85,170,85,255,0,0,D,85,170,85,170,85,170,85,170                            0D63
140 DATA 0,0,0,51,204,51,12,0,12,51,192,48,0,0,0,D                                      0A98
150 DATA 15,60,240,240,240,255,63,15,240,252,255,255,63,255,252,24D                     0E7F
160 DATA 2D,28,20,28,20,28,20,28,186,202,202,189,123,119,205,74                         0E36
170  DATA D,0,0,0,63,207,63,0,3,12,51,15,6D,243,63,15,48,192,D,63,207,63,255,252,0,0,48,192,24D,
192,0,0
                                                                                        151C
180  DATA D,D,12,3,15,3,0,D,12,3,0,252,243,252,255,63,192,48,204,240,60,207,252,240,0,0,0,0,252,
243,252,0
                                                                                        1539
190 DATA 0,0,0,15,6D,243,63,15,D,D,D,255,207,63,255,252                                 DBA8
2D0 DATA 0,0,0,255,243,252,255,63,D,0,0,240,60,207,252,240                              0CA7
210 RUN "odiosum"                                                                       0745
```

redefining the character set Mr Hopkins has redefined a number of those vague symbols that you only discover when you press [ALT] instead of [SHIFT] by accident. (See the different ASCII characters numbers in line 40). So remember if you use any of these characters you will have to reset your machine after playing Odiosum.

The program comes in two parts. The first section redefines the characters it requires and then calls up the main program. It is therefore sensible to call the second program 'Odiosum' or change the file name at the end of the first listing. Mr Hopkins chose the name – you'll discover why. After the first time you can save time by going straight to the second program.

You move left using [Q] and right using [E] and you jump using [P]. Just press [P] once or you bound about the place like a kangaroo. Go to the end of each level and an automatic lift thoughtfully raises you to the next set of dangers. You have to collect the key on the middle level and then get to the door on the top level (top left). Avoid the bird (the author described it as Alan Sugar's executive eating pteradactyl but we can't spell that so we'll just call it a bird) or that will kill you too.

If you find it too difficult (or even not difficult enough) you can change things by altering where the nasties change direction (lines 300,310 and 370) and the speed (contained in the 'ed%' variables in line 40). You can even change what keys to use by small changes in lines 70, 90 and 110. In fact with enough enthusiasm you could create a game with 50 different screens to help you while away the long winter evenings. But don't send them to us. We couldn't do this one.

```
0 REM Odiosum- Main Program                                                    0AD5
10 e$=CHR$(27):rv$=e$+"p":nv$=e$+"q":cl$=e$+"E"+e$+"H":on$=e$+"e":of$=e$+"f"  1461
20 me$="  O D I O S U M  *** Use keys [q] (left) [e] (right) [p] (jump) [SPACE] to play  " 1F9B
30 DEF FNat$(x,y)=CHR$(27)+"Y"+CHR$(31+x)+CHR$(31+y):PRINT of$;:GOTO 620       158B
40 x%=20:y%=24:a$=CHR$(160)+CHR$(161):b$=CHR$(162)+CHR$(163):e%=37:ed%=1:el%=49:ed1%=-1 1663
50 e2%=41:ed2%=1:i%=0                                                          0551
60 PRINT FNat$(x%,y%);"  ";FNat$(x%+1,y%);"  ":in$=INKEY$:IF in$="" THEN GOTO 120 1879
70 IF IN$="q" THEN a$=CHR$(166)+CHR$(167):y%=y%+(y%)31                         0FB0
80 IF y%/2=INT(y%/2) THEN b$=CHR$(170)+CHR$(171) ELSE b$=CHR$(168)+CHR$(169)   16I5
90 IF in$="e" THEN a$=CHR$(170)+CHR$(171):y%=y%-(y%<57)                        0F68
100 IF y%/2=INT(y%/2) THEN b$=CHR$(164)+CHR$(165) ELSE b$=CHR$(182)+CHR$(163)  172F
110 IF in$="p" THEN GOTO 180                                                   091E
120 PRINT FNat$(x%,y%);a$;FNat$(x%+1,y%);b$:GOSUB 280                          1059
130 IF (y%=56 AND x%=20) OR (y%=56 AND x%=14 AND i%=1) THEN GOSUB 390           130E
140 IF y%)42 AND y%(46 AND x%(15 THEN GOTO 240 ELSE GOTO 60                    0F0D
150 IF x%=8 AND y%=31 THEN GOTO 600                                            105E
160 IF a$=CHR$(160)+CHR$(161) THEN j%=1 ELSE j%=-1                             0D22
170 FOR z=-1 TO 1 STEP 0.5:PRINT FNat$(x%,y%);:y%=y%+j%                        1247
180 x%=x%+(z=2):IF y%)31 AND y%(57 THEN y%=y%+j%                               0EAF
190 IF j%=-1 THEN b$=CHR$(168)+CHR$(169): IF y%/2=INT(y%/2) THEN b$=CHR$(170)+CHR$(171) 1900
200 IF j%=1 THEN b$=CHR$(162)+CHR$(163): IF y%/2=INT(y%/2) THEN b$=CHR$(164)+CHR$(165) 19CB
210 PRINT FNat$(x%,y%);"  ";FNat$(x%+1,y%);"  "                                0D37
220 IF i%=0 AND x%=11 AND (y%)33 AND y%(37) THEN GOSUB 260                     11FA
230 GOSUB 280: NEXT:GOTO 120                                                   09AF
240 PRINT FNat$(x%,y%);"  ";FNat$(x%+1,y%);"  "                                0C6E
250 x%=x%+1:PRINT FNat$(x%,y%);a$;FNat$(x%+1,y%);b$:GOSUB 280:GOTO 240         1835
260 PRINT FNat$(11,35);"  ";FNat$(x%,y%);a$;CHR$(7);i%=1:FOR n=0 TO 255:OUT 246,n:NEXT 187A
270 RETURN                                                                     03C0
280 GOSUB 440:PRINT FNat$(15,e%);"  ":e1%=e1%+ed1%:PRINT FNat$(9,e1%);CHR$(176);CHR$(177) IA0D
290 PRINT FNat$(9,e1%);"  ":e%=e%+ed%:PRINT FNat$(15,e%);CHR$(176);CHR$(177)   1829
300 IF e%=31 OR e%=40 THEN ed%=-ed%                                            0AC9
310 IF e1%=48 OR e1%=53 THEN ed1%=-ed1%                                        0B28
320 PRINT FNat$(5,e2%);"  ";e2%=e2%+ed2%                                       0A92
330   IF ed2%=1 AND e2%/2=INT(e2%/2) THEN PRINT FNat$(5,e2%);CHR$(184);CHR$(185);CHR$
(187)
340   IF ed2%=1 AND e2%/2()INT(e2%/2) THEN PRINT FNat$(5,e2%);CHR$(184);CHR$(186);CHR$ ID71
(187)
350   IF ed2%=-1 AND e2%/2=INT(e2%/2) THEN PRINT FNat$(5,e2%);CHR$(184);CHR$(190);CHR$(191);CHR$ 1C97
(183)
360   IF ed2%=-1 AND e2%/2()INT(e2%/2) THEN PRINT FNat$(5,e2%);CHR$(180);CHR$(181);CHR$(182);CHR$ 1BB2
(183)
370 IF e2%=41 OR e2%=47 THEN ed2%=-ed2%                                        1BE2
380 GOSUB 440:RETURN                                                           0B32
390 PRINT FNat$(x%,y%);"  ";FNat$(x%+1,y%);"  ";FNat$(x%+2,y%-1);" ";STRING$(2,178);" " 079E
400 x%=x%-1:PRINT FNat$(x%,y%);a$;FNat$(x%+1,y%);b$;FNat$(x%+2,y%-1);STRING$(4,179) 158F
410 GOSUB 280:IF x%=14 OR x%=8 THEN RETURN ELSE GOTO 390                       1B0E
420 FOR n=0 TO 91:OUT 245,n:NEXT n                                             1348
430 me$="  You died. Better luck next time! +++  ":GOTO 620                    0BDA
440 IF (x%=14 AND ABS(e%-y%)(2) OR (x%=8 AND ABS(e1%-y%)(2) THEN GOTO 420       1374
450 IF (x%=5 AND y%-e2%)-2 AND y%-e2%(4) OR (x%=20 AND y%)42 AND y%(46) THEN GOTO 420 1389
460 RETURN                                                                     1770
470 PRINT cl$:OUT 248,8                                                        03C0
480 FOR n=1 TO 25:PRINT FNat$(n,29);CHR$(173);CHR$(173); FNat$(n,59);CHR$(173);CHR$(173) 07A0
490 NEXT                                                                       1BBD
500 PRINT FNat$(22,20);STRING$(11,179);rv$;STRING$(24,179);nv$;STRING$(4,179)  033E
510 FOR n=23 TO 25:PRINT FNat$(n,31);rv$;STRING$(28,179);nv$:NEXT              18CB
520 PRINT FNat$(27,29);rv$;"  o d i o s u m  ";nv$                             1873
530 FOR n=17 TO 21:PRINT FNat$(n,29);" ":NEXT                                  0D09
540 PRINT FNat$(8,29);CHR$(178)" ";FNat$(9,29);CHR$(178);" "                   0EE7
550 PRINT FNat$(16,31);STRING$(24,172)                                         1078
560 PRINT FNat$(16,43);SPACE$(4);FNat$(10,31);STRING$(24,172)                  1619
570 PRINT FNat$(11,35);CHR$(174);CHR$(175);FNat$(10,43);SPACE$(4);FNat$(10,20);STRING$(11,179) 1990
580 OUT 248,7:RETURN                                                           14F7
590 FOR n%=0 TO 91:OUT 245,n%:NEXT                                             07E2
600 FOR n%=-255 TO 255:OUT 246,ABS(n):OUT 245,ABS(n):NEXT:OUT 245,91:PRINT CHR$(7) 0B93
610 me$="  +++ Congratulations you have completed ODIOSUM  "                   1C47
620 GOSUB 470                                                                  16FB
630 PRINT FNat$(28,29);rv$;LEFT$(me$,32);nv$:  me$=RIGHT$(me$,LEN(me$)-1)+LEFT$(me$,1) 03FD
640 IF INKEY$()" " THEN GOTO 630 ELSE GOTO 40                                  1422
                                                                               0ECA
```

LOGO/STOP PRESS CONVERTER

by Dr MD Buckley-Sharp

Over the months we seem to have been neglecting poor old Logo but this month Dr Buckley-Sharp has given the high resolution graphics a boost with this program to convert Logo Pic files into a format suitable for loading into Stop Press.

Why should you want to do this?

Well as the good doctor points out Logo gives you shapes drawn from a formula rather than freehand as in Stop Press. So if your drawing needs to be correctly scaled or involves a mathematical function as would a graph, it is probably the easiest method to use.

To do this you have to save your Logo drawing as a '.PIC' file. This is done with the SAVEPIC command `savepic "monalisa"` which will give you a file called MONALISA.PIC on disc.

Now it so happens that a '.PIC' file has 92160 pixels, which by a strange quirk of fate is the same number as in a Stop Press '.SPC' file – although they are in a different order.

This program simply uses BASIC to convert them to the right order. Just type in the .PIC file name when prompted and you wait until all 32 lines are converted.

```
10 PRINT "Press [RETURN] for a list of .PIC files on this drive or"                1B1C
20 PRINT "Enter filename without .PIC extension";                                  15C0
30 ON ERROR GOTO 0                                                                 074D
40 INPUT picf$:picf$=UPPER$(picf$)                                                 0BAF
45 IF LEN(picf$)=2 AND RIGHT$(picf$,1)=":" THEN 100                                0F6D
50 IF picf$="" THEN GOTO 100                                                       0914
60 spcf$=picf$+".SPC":picf$=picf$+".PIC"                                           0C41
70 IF FILES$(picf$)<>"" THEN GOTO 130                                              0ADA
80 PRINT "Input file '";picf$;"' not found"                                        0EC2
90 IF LEN(picf$)>2 AND MID$(picf$,2,1)=":" THEN picf$=LEFT$(picf$,2) ELSE picf$="" 18A7
100 IF picf$<>"" THEN PRINT picf$;" drive"                                         0F1E
110 ON ERROR GOTO 120:FILES picf$+"*.PIC":PRINT:GOTO 20                            15A2
120 IF ERR=53 THEN PRINT "No files":RESUME 10                                      110C
130 ON ERROR GOTO 0                                                                06EB
140 OPEN "R",1,picf$:OPEN "O",2,spcf$                                              0AD4
150 DIM d$(8):PRINT "Wait....Converting 32 lines"                                  1106
160 GET #1,2:available%=128                                                        09BE
170 FOR line%=1 TO 32                                                              05B9
180 FOR row%=1 TO 8:d$(row%)=""                                                    08EA
190 need%=90-LEN(d$(row%))                                                         077C
200 IF available%>=need% THEN GOTO 230                                             0D6C
210 IF available%>0 THEN d$(row%)=d$(row%)+INPUT$(available%,1)                    16B9
220 GET #1:available%=128:GOTO 190                                                 0C33
230 d$(row%)=d$(row%)+INPUT$(need%,1):available%=available%-need%                  15CB
240 NEXT row%                                                                      047F
250 FOR column%=1 TO 90                                                            07C6
260 FOR row%=1 TO 8:PRINT #2,MID$(d$(row%),column%,1);:NEXT row%                   1700
270 NEXT column%                                                                   070D
280 PRINT CHR$((line% MOD 10)+48);:NEXT line%                                      0E57
290 PRINT:CLOSE:PRINT "Finished. Converted file is in ";spcf$                      1989
300 END                                                                            02BB
```

If you've forgotten which files you have on disc just press [RETURN] and a directory of the .PIC files on the disc in the current drive is printed out. Put in the drive letter with a colon (for example `B:`) to get a directory of that drive.

When you get the picture into Stop Press you can reverse the screen (K2 on the Stop Press menu) if that suits you better.

Better and Better

Readers seemed pleased with our spell checking program last month but as with all programs, there's always an improvement. Roy Archer has sent in some minor alterations to the program that mean that as well as spell checking the program also does a word count.

All that needs to be done is adding the word `:count=0` at the end of line 30, changing line 260 to read

```
260 IF word$>"" THEN
count=count+1:GOSUB 320:PRINT
#3,word$;:word$=""
```

and amend line 680 to

```
680 CLOSE #1:CLOSE:PRINT:PRINT
"File ";check$;" contains
";count;" words": END
```

As the counting is done in line 260, before the program discards the words of under two letters and those of more than 18 letters it should be pretty accurate.

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LOGO CAPTIONS

by Robert Samuels

In a sudden surge of interest in Logo we include one or two short utilities that make life easier for the Logo user who wants to mix graphics and text on screen.

First there is a caption writer. So once you have completed your Logo version of "When did you last see you father?" you simply move the cursor to place where you want your caption to go. Then type in `turtlepos` (which finds the current turtle position and sets the cursor to it) `caption` (which prompts you for the caption) and `write` (which writes it centred on the turtle). It also ends up with `fs` or full screen giving the full screen over the graphics and therefore cutting out any gunge when you save the picture (and convert it into a Stop Press formula if you've tried the other converter listing).

The final effort is a simple but effective method of tagging your efforts. Again when you are finished type FIG and a number (say `fig 3` and 'Fig.3' appears in the top left hand corner – or wherever you want by setting the figures after setcursor.

You load Logo by typing `LOGO` when you have the suitable CP/M utilities disc in the drive and just enter them as you see them here pressing [RETURN] at the end of each line. By writing `SAVE "` *filename* you can save all the utilities to disc and these can be loaded the next time you use Logo by typing `Load "` *filename*.

```
to turtlepos
 make "xpos item 1 tf
 make "ypos item 2 tf
 convertpos
end
to caption
 setsplit 4
  ss
 pr [What is the caption?]
  make "caption rq
  make "captionlength (count :caption)
 ts fs
end
to fig :no
 ts
  setcursor [70 5]
  type se [fig.] :no
 fs
end
to write
 ts
  setcursor (se (:column - round (:captionlength / 2)) :line)
  pr :caption
 fs
end
```

How to type in a listing

Load up Mallard BASIC – to do that, insert your CP/M disc, reset the machine and at the A> prompt type `BASIC`[RETURN]. Now you see the 'Ok' prompt. Just type in the lines of the listing exactly as they are printed on the page (but not the numbers on the extreme right). Type `LIST` at any time to print out your typing so far to the screen; if you want a printout to pore over, type `LLIST`.

Mistakes made before you press RETURN can be corrected with the DEL keys, otherwise you have to use the line editor. Suppose you've made a mistake in line 100; type `EDIT 100` and then you can use the cursor keys and DEL keys to correct it. Press RETURN when the line is OK. To delete a whole line, type its number only and press RETURN.

When you've finished, save the program to a disc by the command `SAVE "FRED` (or any other suitable name of eight letters or less). To run the program, type `RUN`.

Programs rarely run first time, but when BASIC encounters a mistake it tells you where it is. 'Syntax Error in line 60' means a mistake in that line (though the actual typing error may have occurred in a previous line, causing problems in this one). Other error messages can often occur too. Use the EDIT command to correct it.

You can rerun the program another day by loading BASIC up as before and, with the disc on which you saved the program in the drive, typing `LOAD "FRED` and then `RUN`.

Good programs needed !

We're looking for well written programs of up to 50 or so lines which we can print in these listings pages each month. Of course, since we can fit more of the shorter listings in, and they're easier to type, the longer ones have to be really special!

If you can program you could earn hard cash and instant fame by having your program printed in 8000 Plus. Give instructions on an accompanying sheet for using the program, and if there are any useful modifications that readers can make by simple edits to customise the program, mention those too.

To submit a listing you must supply:

1) A printout of the listing;

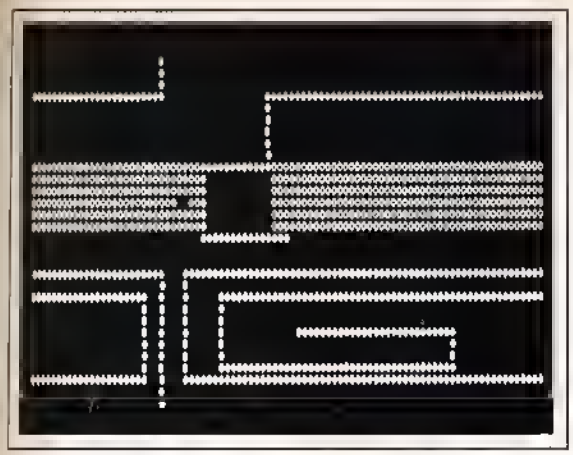
2) A disc on which it is saved;

3) A stamped addressed padded bag for its return;

4) An explanation of what it does and how to use it;

5) A signed statement confirming that the program is your own work and hasn't been submitted to anyone else.

Send all this to *Listings, 8000 Plus, Bath BA1 1EJ* and allow up to 40 days for the return of your disc – we assess the listings in a batch once a month.



SQUONK

by Peter Gerrard

The best games are always the simplest ones. This one is delightfully simple to explain but ''''' hard to win. All that happens is that two streams of diamonds shapes (one filled diamonds, one empty) appears on the screen. You control the direction of the line of filled diamonds using the cursor keys. At the same time the PCW is controlling the line of empty diamonds.

What you have to do is not cross your own or the computer's line – at least not until the computer is stupid enough to do it first. You can even go off the edge of the screen if you want. Going off the top brings you out at the bottom the screen and so on.

Sounds easy, doesn't it? Well the problem is that the diamonds do appear on the screen at a rapid rate of knots and you don't really have much time to ponder on the meaning of life while you are playing.

The computer actually cheats a bit because it waits until it reaches a line of diamonds and pauses for a fraction of a second deciding on which way to go (it chooses at random although at times it doesn't seem like it). You don't have the same opportunity so planning in advance is the order of the day.

The idea is to try to box off the computer's line while being sure of staying out of trouble yourself. The program helpfully points out at the end of each game how often you have failed to do it.

And the name? Well 'Squonk' is actually just a word that Mr Gerrard happens to like and who are we to question the thought processes of a creative genius.

```
0 '                                                                                0020
10 PRINT CHR$(27)+CHR$(48);:PRINT CHR$(27)+"f";                                    0E9B
20 cls$=CHR$(27)+"E"+CHR$(27)+"H":PRINT cls$                                       0CC6
30 PRINT:PRINT"Press SPACE to start game."                                         12A8
40 a$=INKEY$:IF a$=" " THEN PRINT cls$;ELSE 40                                     0E03
50 a=PEEK(64504!):RANDOMIZE (a)                                                    0A4D
60 DIM a%(90,32)                                                                   0460
70 a$="dulr":xo=30:yo=10:mo$=MID$(a$,INT(RND(1)*4+1),1):GOSUB 440:PRINT CHR$(187); 199F
80 x=45:y=16:dir$=MID$(a$,INT(RND(1)*4+1),1):GOSUB 420                             1146
90 PRINT CHR$(188);                                                                05A5
100 a$=INKEY$:IF a$="" THEN 200                                                    0738
110 IF a$=CHR$(1) THEN dir$="l":GOTO 200                                           0BE8
120 IF a$=CHR$(6) THEN dir$="r":GOTO 200                                           0C08
130 IF a$=CHR$(31) THEN dir$="u":GOTO 200                                          0D47
140 IF a$=CHR$(30) THEN dir$="d":GOTO 200                                          0CE2
150 GOTO 90                                                                        036C
160 ok=FRE("");IF dir$="u" THEN 380                                                099B
170 IF dir$="d" THEN 390                                                           063B
180 IF dir$="l" THEN 400                                                           063C
190 IF dir$="r" THEN 410                                                           0661
200 a=0                                                                            01DD
210 IF INT(RND(1)*100+1)>99 THEN 300                                               0A20
220 IF mo$="l" AND xo>1 THEN IF a%(xo-1,yo)<>1 THEN xo=xo-1:GOTO 360               1752
230 IF mo$="l" AND xo=1 THEN IF a%(88,yo)<>1 THEN xo=88:GOTO 360                   13F5
240 IF mo$="r" AND xo<88 THEN IF a%(xo+1,yo)<>1 THEN xo=xo+1:GOTO 360              1685
250 IF mo$="r" AND xo=88 THEN IF a%(1,yo)<>1 THEN xo=1:GOTO 360                    1402
260 IF mo$="u" AND yo>1 THEN IF a%(xo,yo-1)<>1 THEN yo=yo-1:GOTO 360               17CB
270 IF mo$="u" AND yo=1 THEN IF a%(xo,30)<>1 THEN yo=30:GOTO 360                   130F
280 IF mo$="d" AND yo<30 THEN IF a%(xo,yo+1)<>1 THEN yo=yo+1:GOTO 360              1797
290 IF mo$="d" AND yo=30 THEN IF a%(xo,1)<>1 THEN yo=1:GOTO 360                    12F8
300 IF dir$="l" THEN mo$="r"                                                       0755
310 IF dir$="r" THEN mo$="l"                                                       0769
320 IF dir$="u" THEN mo$="d"                                                       076A
330 IF dir$="d" THEN mo$="u"                                                       0739
340 a=a+1:IF a<2 THEN 220 ELSE a$="udlr":mo$=MID$(a$,INT(RND(1)*4+1),1)            14D6
350 IF a<20 THEN 220 ELSE PRINT cls$;"I crashed!  Disaster!":human=human+1:GOTO 450 2027
360 GOSUB 440:PRINT CHR$(187);                                                     0AE9
370 GOTO 160                                                                       03A7
380 IF y>1 THEN y=y-1:GOSUB 420:GOTO 90:ELSE y=30:GOSUB 420:GOTO 90                1844
390 IF y<30 THEN y=y+1:GOSUB 420:GOTO 90:ELSE y=1:GOSUB 420:GOTO 90                184D
400 IF x>1 THEN x=x-1:GOSUB 420:GOTO 90:ELSE x=88:GOSUB 420:GOTO 90                1842
410 IF x<88 THEN x=x+1:GOSUB 420:GOTO 90:ELSE x=1:GOSUB 420:GOTO 90                1846
420 IF a%(x,y)<>1 THEN a%(x,y)=1:PRINT CHR$(27)+"Y"+CHR$(32+y)+CHR$(32+x);:RETURN  186B
430 PRINT cls$;"You crashed!  Ho ho ho!":computer=computer+1:GOTO 450               1940
440 a%(xo,yo)=1:PRINT CHR$(27)+"Y"+CHR$(32+yo)+CHR$(32+xo);:RETURN                 1602
450 PRINT:PRINT:PRINT "Score now stands at you"human"me"computer                   1BE8
460 ERASE a%:DIM a%(90,32)                                                         06C6
470 PRINT:  INPUT "Another game <Y or N>",y$                                       0F70
480 IF UPPER$(y$)="Y" THEN PRINT cls$: GOTO 70: ELSE PRINT CHR$(27)+"e":END        185B
```

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TIP OFFS

Advice so valuable even loadsa money couldn't buy it

LocoScript driving you loco? Mystified by Mini Office? Desperate about your DTP? You've come to the right place. Loadsa tips, loadsa inside info.

Know a few tips yourself? Don't keep them a secret – tell us at TipOffs, 4 Queen St, Beth, BA1 1EJ. The best tips win £30! Plastering his walls with used fivers this month is wily scouser RJ Osborne for his marginal tip. Loadsa money, ha ha!!!

Do the twist

You can easily double the life of those expensive carbon ribbons. Only the top half gets used, so by reversing the film you can use the lower, unused half.

Take the work out ribbon and release the catches which hold the top of the casing in place. Gently prise off the top using a pocket knife or flat screwdriver. Keep the casing as a whole upright during this procedure. On opening the case you'll see the ribbon bunched up in the middle. Before removing the ribbon, take note of how it is threaded through the cogs and out of the arms on the left and right. On the right you will see that the ribbon passes through two cogs after it has entered the case. The rear cog is spring loaded; push it backwards and lift the ribbon free. Now simply tip the ribbon out onto the table. Take a length of ribbon and thread it through the arms and the cogs as noted before. The shiny side should face inside, ie. threading the ribbon through the right hand arm, the shiny side should face left and vice versa. The used up part of the ribbon should be lower than the unused part. You will now have a length of ribbon threaded inside the casing, through the cog wheels and out through the arms on the left and right. The mass of ribbon still lying on the table. Now replace the top of the casing.

Finally, wind the remaining ribbon into the casing by turning the knob on the right. Do this with one hand, use the other to feed the ribbon, to make sure it goes in straight.

Once all the ribbon has been wound in and the loop begins to advance as normal, replace the ribbon and there's another fiver's worth of clear crisp printing!

Fabric ribbons come with a twist to make them one-sided Mobius strips. They 'turn over' automatically and both halves get used anyway, so you can't do this to a fabric ribbon.

Ted Alkins, Hull, Yorks
Ishbel Kargar, Ormskirk, Lancs, and others

Down in the dumps

Two tips for Logo fans. For printing out, typing `cs fs` will clear the textlines at the bottom of the split screen without affecting the diagram. Also, typing [ALT] [and then 0 (zero, not O) will clear the 'Drive is' message prior to a screen dump.

Robert Samuels
Cambridge

Top form

Form filling is an ideal job for the PCW. You can set up a TEMPLATE.STD with all the headings and then just fill in the details (name, address etc.) in a new document as required. You can use LocoScript's effects to make it look really professional – putting the headings in bold italic, for example, and the entries in plain text.

Unfortunately the unit markers only enable you to jump to the beginning of a line, which isn't what you want on a form. You want to jump straight to the beginning of each space to be filled in.

An easy way to do this is to set up your TEMPLATE.STD so that there's an asterisk (or any little-used symbol) at the beginning of the slot for each item of information. You can mark out boxes each of depth one line in reverse video to make it clear where the information is to go. You can stack these boxes on top of each other if you have multi-line entries (eg. addresses) to make. The business of making the forms thereafter is made very easy.

Make up a TEMPLATE.STD as follows. Set up the layout ([f2] in Loco 2, 'New layout', [f2] in Loco 1, 'Brand new layout') so that there is a tab set at the beginning of each box and a tab at the right-hand end. There should be none in between. If you want to have different widths of box for different entries you will need different layouts for each.

Write the heading ('Name' etc.) at the left margin, then press [TAB]. Press [+]RV and [TAB] again followed by [·]RV. You will mark out one strip of reverse video. End with [RETURN]. If you want a multi-line box repeat this process for as many lines as you want.

When the form looks as you want it, save the TEMPLATE.STD. Now every document you create has the form ready set up. To jump to each new line to be filled in, press [FIND] and the first time you do this give * as the thing to be found, followed by [ENTER]. Thereafter just press [FIND] [ENTER] to jump to the next slot.

Type in information as required and remember not to press [RETURN] – the [FIND][ENTER] effectively takes the place of that. of course the reverse video only shows on screen and doesn't print out. To take out the *s from your final document, press [EXCH] and just move the cursor down to 'automatic exchange' followed by [ENTER]. All the stars are stripped out.

Paul M Brown
Maldon, Essex

Marginally better

Notes in the margin of a document have a variety of uses – summaries, section headings etc. In Protext this is easy – you just write your margin note under a suitably narrow-margined ruler line then use the 'box' insert facility ([ALT]B) to cut this box out and paste it into the appropriate place in the main part of the document. In LocoScript the problem is you can't get this multi-column facility, so adding notes always involves compromise.

Section headings are easy: a clear case for [ALT][TAB]. Set a tab stop where the left hand margin of the main text is to be and then, after typing in each section number, press [ALT][TAB]. This aligns the left edge of the subsequent paragraph with the tab position as required; of course any further unheaded paragraphs will need to begin with an [ALT][TAB] too.

Margin notes which go over one line will really have to go on the right-hand side of the text.

Marginally better still

Here's one way of putting margin notes into a document such that you can have your main text justified if you want.

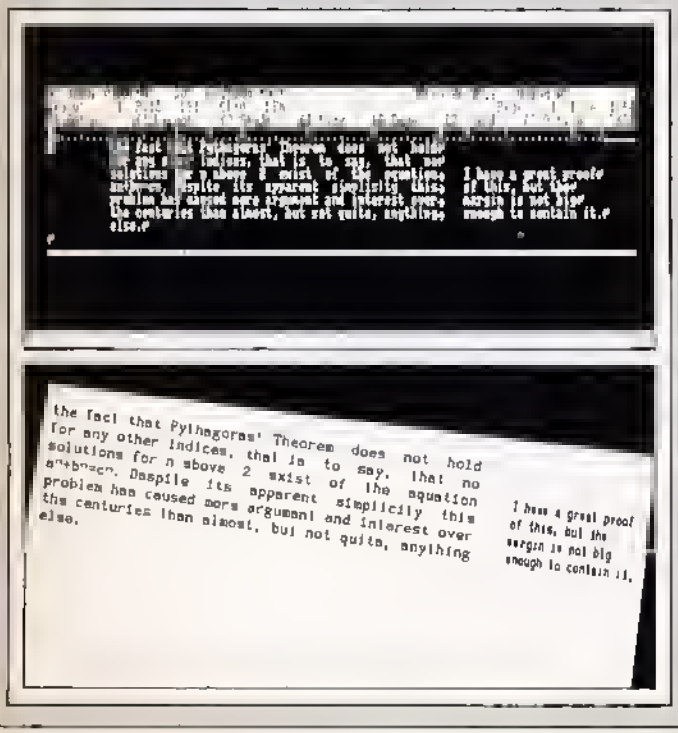
First type the main body of the text with margins set at, say, 10 and 60. When you're sure it's OK save and exit and make an ASCII copy of it ([t1] in Loco2, [t7] Loco1). Call the new file anything you like and put it in any group but make you choose the 'page image' option.

Then create a new empty document and 'insert text' ([f1] in Loco2, [t7] Loco1). Move the cursor over the ASCII file just made and press [ENTER] a couple of times. You lose all the italics and bolds and fancy characters, though you can put them back later on.

You see the document you typed in appear on screen with spaces at the left-hand side and [RETURN]s at the right. Put the cursor at the beginning of the document and press [f2] for a 'new layout'. Put the margins at 0 and 80 and a tab at 64. [EXIT] back to the main document.

Now go through the text and insert the margin notes by going to the end of the line in question ([EOL]) and pressing [TAB]. Type in the first line of the note (don't press [RETURN] at the end, just [EOL] to move down) making sure you don't go over one line. Repeat for each line of the note. Those returns keep the main text straight. You can change the margin settings if you want wider notes and narrower text, and the notes can go in 17 pitch to make them look smarter. Of course editing the notes or the text of the document after you've set it up will destroy the layout, so put your margin notes in at the very last minute!

R J Osborne
Pitton, Salisbury



More efficient Office

Wouldn't it be nice if you could select those options from Mini Offices various menus with single key presses instead of cursors-plus-[ENTER], just like you can in LocoScript (where you can immediately select 'Save and Print' from the document exit menu, for example, just by pressing P). Well, you can!

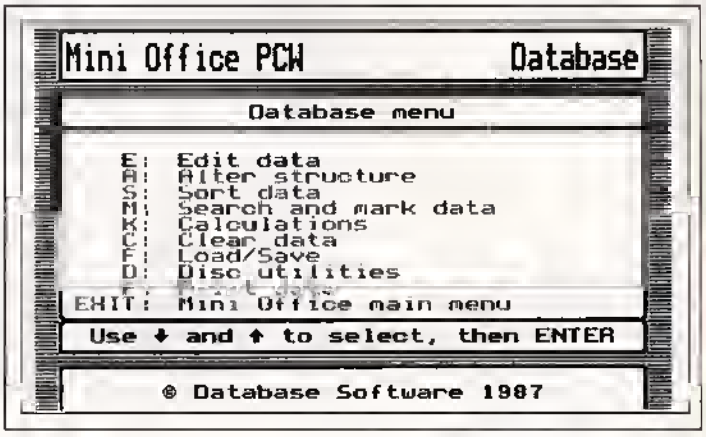
All you have to find out which key press actions which option is to press [SHIFT][+]. Letters suddenly appear beside each option and pressing the appropriate letter selects that option.

You can put this to use in your PROFILE.SUB file. Suppose you have made a database startup disc with Mini Office's DBASE.COM and OFFICE.COM thereon, and always start off by loading the database (which can be achieved just by pressing D) then loading up a file. Your PROFILE.SUB can contain these lines:

```
OFFICE
<DFL
```

which will put you all ready to type in the name of the file to load.

Martin Punch
London



Power up your Protext

One of the few ways in which Protext is slower than LocoScript is in the use of print codes. Instead of [+]I to set italics, as in Loco, you press [ALT]XI in Protext. However, it's only a matter of five minutes' work to redefine the [+] key so it duplicates [ALT]X in one push, making Protext codes just as fast as LocoScript. The only condition is that you'll then have to use [SHIFT][COPY] to set the block markers instead of [SHIFT][+], but that's more logical anyway.

First load your Protext startup disc and then load the 'config' file file from side 2. Select 'Setkeys for PCW' from the opening menu. Type in 23 and you'll see a number of columns; the ones we want to alter are the HEX codes, so press [TAB] and this puts you into them. Under the columns marked N for normal and S for shift, type 18 over the present codes. That's all there is to it! Press [STOP] twice to go back to the config menu and put your startup disc in the drive, then press 9 to save.

Another thing you can do if you miss LocoScript's helpful automatic formatting is to include in your EXFILE the line `KEY V ^218^^6^` and then every time you press the [f3] key, Protext will automatically format the paragraph you're working on. Or you can just type in the line in command mode to set this up. That ^ character is [EXTRA]U or [EXTRA]; and you can execute your EXFILE with [EXTRA][ENTER].

David Griffith
London

Printer's working weak?

Printers which have been in service a year or two lose traction and paper starts to slip as it's being fed in, due to 'roller shine'. A solution to this is to take a rag and some methylated spirits and clean the roller. The meths won't attack either the roller or the plastic casing. A surprising amount of black stuff comes off but eventually stops, when your roller should be back to its normal rubbery self.
Prof. DR Witkie
London

Layout your copy

You can put all sorts of things into phrases in LocoScript including codes. For example, changing layouts can be speeded up it you copy a phrase such as {+LayouT1} into 1 (put the cursor before the code, press [COPY], move it to the end, press [COPY] again followed by 1}. Then to insert the layout 1 into a document you just type [PASTE]1. You can also include carriage returns, tabs and so on.

You can also use this for any set of instructions used frequently – for example underlining from the position of the cursor to the end ot the page is achieved by the sequence {+UL}{+RA}{-UL} (in Loco 2) or {+UL}{+R}{-UL} (in Loco 1). This can be copied as above into a phrase under L say. Then [PASTE]L draws a line to the end of a page for you.
Joan Nugent
Liverpool

Office Directory

When you've got Mini Office in Load or Save mode, or of course in 'directory' mode, you have a directory of all the files on your disc. If you do a screen dump ([EXTRA][PTR]) the result, when trimmed to size, exactly fits the standard plastic disc case, giving you a quick way of making up-to-date disc labels.
Mary Turner
Dartmouth

Desert Island Tipoffs

The weekend starts with Friday – but who needs a Friday when you've got a PCW? A miscellany of one-line time-saving tips to keep your weekends free on your paradise island...

1. Erase a laugh

Ever had the problem of wanting to erase all 33 files on that disc except one? Instead of typing 32 erase commands, just type ERA *.*[C] (you'll need a disc with ERA.COM on it in the drive; alternatively, copy ERA to the memory with by putting your systems disc in the drive and typing PIP M:=ERA.COM and type M:ERA in place of 'ERA' above).

The PCW will delete all files but will ask you to confirm each erasure with a Y or N; type Y tor all the ones to junk and make sure you press N for the ones you don't!

2. Quick menus

Fed up of using the cursors to select menu options In LocoScript? You don't have to. Suppose you're exiting a document; a menu appears giving you those options to Finish edit, Save and Continue, Save and Print, or Abandon edit. Press A and you jump straight to Abandon edit; SP takes you to Save and Print, etc. This works tor all menus.

3. Run faster

How do you run a BASIC program called say SAM.BAS from CP/M? Easy, just type BASIC at the A> prompt, then when the 'Ok' prompt comes up, type RUN "SAM. But you can do it taster – back in CP/M, type BASIC SAM and the program runs as normal. When it's finished you're returned to the A> prompt.

4. Stopping and starting

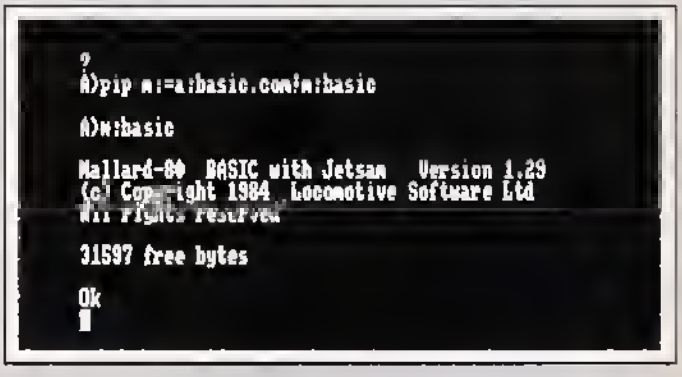
Ever wanted to stop a CP/M application, such as PIP, or a BASIC program, in midstream? If you press [f5] your PCW takes a time out until you resume with [t3] (or stop with [STOP]).

5. How low can you get

Sometimes the above tip doesn't work (with, for example, games like TETRIS). This is because the program works at a 'lower level' than the [t5] key. The [PTR] key is lower still, and if you want to pause for breath in your TETRIS game, just press [PTR] and then [EXIT][to resume.

6. At your command

You can string a series of commands in CP/M together if you separate them by an exclamation mark. If for example you want to copy some files to the memory, then run BASIC, you can just enter the line PIP M:=A:BIGFILE.DOC!PIP M:=A:BASIC.COM!M:BASIC and watch your wishes be carried out.



7. Loco 1 countdown

If you're using LocoScript 1 to write long documents you will be storing them in small chunks. This means that you'll have to keep jiggling the page numbering to make the third document follow on from number two and so on after you've edited number one and so on.

The quickest way of finding out how many pages a section has without actually editing it Is to press P for print, select the 'print some pages' option, and note what the lastpage in the document is. You can then press [CAN] to abort the command and set the page number of the next document appropriately.

8. STOP before you start

Often you want to start CP/M up to get to the A> prompt but the only disc to hand has a wretched PROFILE.SUB on it which will reel off a series of fifty commands. All you have to do is press the [STOP] key a few times when you see the opening messages appear on the screen and the PROFILE.SUB won't run.

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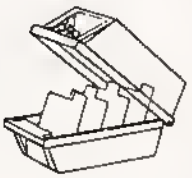

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These pages provide a comprehensive guide to the Amstrad PCW software. Published in three monthly parts, this time it's the turn of Databases, Education, Communications and Programming packages to face the ultimate test. We've set out to cover every important piece of software we could lay our hands on, and to give you enough information to decide whether they are suitable for you.

The software listed here represents what we consider to be the best of the many programs available. As well as a brief summary of what they do, the main Plus and Minus points for each program are listed – Pluses have a □ by them, and Minuses a ■. Those we think are particularly noteworthy have a flash on them.

To the best of our knowledge, all the programs here should run on both 8000 series machines and the 9512.

• DATABASES •

There are broadly two different types of database, and which suits you best depends, of course, on what you want it for.

Firstly there's the simple card index substitute. For many home users, this will be the kind of thing you want – all it does is store your address book or stock items so that you can easily look them up.

A more sophisticated option is the programmable database. With these, in addition to allowing simple card index retrieval there is a command language which allows you to analyse the data on the cards. For example, you could automatically add up the money owed to you by all your customers from Yorkshire. To make best use of this kind of facility, you will need to be able to understand a little programming, although it's not too hard really.

A bit of jargon now. A database is said to consist of records – this is just like a card in a conventional card file, with all someone's details on it. Each record is composed of fields – a field is a single entry on a card, like someone's name, or age, or postcode.

The thing that makes a database special is an index. You might be able to hold your address book as a simple list in a word processor document, but if it gets large then this becomes unwieldy. An index means that the database has worked out which order records should be in, so it can go straight to the one you want without looking at lots of others first.

The field that you use as your index (e.g. someone's surname) is said to be a key field, and can be looked up very fast compared to "non-key" fields. A good database will allow multiple keys, meaning that it can look up data just as fast for a variety of types of information.

MASTERFILE 8000

£49.95 • Campbell Systems • 0378 77762/3

A specially written PCW version of the successful database sold on other Amstrad computers. It is fully menu controlled, and makes good use of the PCWs special screen and keys. It can deal with up to 8 separate data lines at once, so can cope with relational databases. Screen (but not printed output) can be elaborately laid out with boxes, lines etc.

PLUSES · MINUSES

- Works fast
- Wide range of layout options
- Handles 'relational' files
- Plenty of good example files
- Can do arithmetic calculations within its records
- ■ Capacity limited by size of M drive – best on an 8512
- ■ Takes a while to learn all the features

ATLAST

£39.95 • Rational Solutions • 0566 81511

Recently released revised version with new manual and a new price. Atlast Plus is a full featured database that is excellent value for money. It does what Cardbox did, with much better reporting facilities, and can sort too. You can do simple totalling of columns, but not general arithmetic on fields in a record. Its claims to be a true 'relational' database like dBase II are a little grandiose, but a good general purpose database – recommended.

PLUSES · MINUSES

- Good screen editing facilities
- Constants enable insertion of repetitive data.
- Good on storage space – ideal for 8256 owners
- Handles names and addresses well.
- ■ Still no arithmetic calculation in field
- ■ Setting up the database is at first confusing – function of 'SYS' file unclear
- ■ The manual is better than the old one but could be further improved for beginners.

MINI OFFICE PROFESSIONAL

£29.95 • Database Software • 0625 878888

Mini Office is a suite of five integrated programs – database, word processor, spreadsheet, graphics module and comms package. The database is a pretty standard card index type, similar to First Base. Good range of selection operations and arithmetic on fields. Can sort over a combination of fields and print out a variety of smart layouts, and you can have up to 255 fields! Of course you're getting four other very good programs as well. The big problem is that you can't import data, so any data you already have must all be re-entered. No export either.

PLUSES · MINUSES

- Easy to use and intuitive
- Can use the data in the word processor
- Powerful selection and sort facilities
- Arithmetic on fields
- 'Test print' facility lets you check your labels will print OK
- Can make global changes, ie. change '£3.50' to '£5' in all records with one command
- ■ Can't import or export data
- ■ Manual is of very little use

CAMBASE

£49.95 • Camsoft • 0766 831878

Cambase is very strong on data security – you can define passwords to protect sensitive databases. It is driven by quite an intricate set of menus, and you'll have to plan your application carefully since the database format can't be changed once set up. Generally good for writing applications with.

PLUSES · MINUSES

- Sensitive data can be protected by a password system.
- Record structure can be conditional – e.g. 'only have a 'spouse' field if status is 'married''
- 'Processes' provide for some simple automatic calculations
- Over-protective user interface, which asks for confirmation of almost every command
- ■ Database main attributes are fixed after initialisation and can't

be changed.
Doesn't have full screen editing of records
Manual needs an index, and is weak on explaining advanced topics
The (single) key field has to be entered separately to the record data proper

DELTA

£99.99 • Compsoft • 04868 25925

Delta is another of the heavyweights, like dBase II and Condor, but unlike them is fully menu driven. Although the screen layouts are fully flexible, there is a default 'quick' layout so you don't have to sweat at defining your own. It could use better record indexing facilities. Particularly good for writing applications, once you have ploughed through the large manual.

PLUSES • MINUSES

Records can contain up to 90 fields, plus groups of fields that may be repeated
Screen layout can be user defined, or 'quick' mode used
Single-page letter writer provides detailed mail-merge
Processes can be defined, and run from user defined menus, for ease of use by others
Very full, and quite readable, manual
Only one field may be used for indexing
Very big program – a PCW8256 would be hard pushed
Some of the menu operations are unforgiving to errors

POCKET INFOSTAR

£69.50 • MicroPro/DRA • 0386 841181

Consists of two large programs, DataStar and ReportStar (both available independently). DataStar is a conventional database, with screen card layout and indexing. ReportStar then generates the printed output, either from DataStar or CalcStar files. Powerful if you can use them, but the suite is hopelessly overcomplicated, and the documentation just incomprehensible.

PLUSES • MINUSES

DataStar is a quite good database with indexing and calculated fields.
"Transaction processing" feature allows cross-referencing of data files.
Can be integrated with other Pocket products, eg WordStar.
Can take up to 255 fields per record
Two-volume manual set is very badly organised.
There are separate programs to run for form design, data entry and reporting.
Operation is all by obscure command keys, à la WordStar.

CARDBOX-PLUS

£99.95 • Business Simulations • 0892 863105

Business Simulations are the company who actually wrote the successful Cardbox database, and they are the sole distributors of their enhanced version Cardbox-Plus. Disappointingly, still no field totalling facilities, but it does boast sorting, index listing, disc management and an autosave feature as extras to Cardbox. The ultimate straight card index, if you have the money.

PLUSES • MINUSES

All the facilities of the very successful Cardbox
Cards can be sorted into order for browsing and printing
"Autosave" will regularly store the data to disc in case of mishap
Files created by Cardbox can be read
Full and good manual, although the tutorial is at the end
Still no way of performing numeric calculations
A lot to pay for a few frills to the basic Cardbox

CHIBASE

£49.95 • Chiasma • 06333 60996

A free format database, which means you don't have to go through the usual rigmarole of defining your record format before you can enter your data. Instead, you just type text into Chibase, mark the words to be indexed, and it can then treat that file as a database.

PLUSES • MINUSES

Doesn't require you to set up a preset 'record' card
Searches through your data very quickly
Allows you to select up to 50 keys for each page of text
Allows editing of text without a word processor
- No sample file for you to learn on

DBASE II

£99.00 • Ashton Tate/First Software • 07357 5244

The WordStar of database packages. Recently licensed 'cheeply' for Amstrad machines. dBase II is a market leader in business computing. As you would expect, this means it is very powerful but very complex. It has a procedure language to allow you to write programs to manipulate the data, and you can construct index files for really fast access to large databases. If you can make the effort to learn it, it'll serve you well.

PLUSES • MINUSES

Powerful command language for customised programs
Indexing facility makes large databases fast to handle
Can handle very big databases
The data can be fairly easily altered after its entry
- Manual is daunting (but there are plenty of independent books on the market)
- Can't easily alter the screen record layout
- For an expensive package, you still only get 32 fields per record

Generally unfriendly unless you have some programming skills

FT=DB

£29.95 • Encyclasoft • 0270 811868

A free form database like Chibase, but instead of typing your text into the database itself, you create it on a wordprocessor first of all. Once done and edited to your liking, you mark all the words you want to be used as keywords (still in your word processor) and then feed it into FT=DB. Now you can treat it as a database, compile indexes, search for phrases and so on, all quite efficiently.

PLUSES • MINUSES

Easy to use
Versatile retrieval system over several text files
Inexpensive
Can move between index and text at will
- No editing facilities within FT=DB

FIRST BASE

£29.95 • Minerva • 0392 37756

Billed as a simple database for the first time user, First Base is quite a competent cheap card index. The manual is computer printed, and weak on diagrams which doesn't help things. One weakness is getting printed results out of First Base – either you settle for crude lists, or you have to create a template in LocoScript which is awkward to do. But overall, for simple applications and beginners, it's pretty good value for money.

PLUSES • MINUSES

Can alter the index field at any time
Simple to use screen editing makes data entry easy
Good value as a simple card index lookup system
Can easily browse through the database picking out a set by hand
- Manual is badly laid out and generally difficult
- Producing printed output is awkward

SAGESOFT RETRIEVE

£70 • Sagesoft • 091-284 7077

A high-power package that is relatively easy to use with password security if desired, calculations, automatic counting of deletion of sets of records satisfying given conditions. It also has sophisticated sort and select commands, and change the structure of an existing database. All this is done by a set of commands rather like a programming language. Printed formats are rather limited though and the program insists on using both drives, making use on a 8256 impractical.

PLUSES • MINUSES

Easy to use for a powerful package
Advanced sorting and selection commands
Subsets can be written to files
Can count or delete subsets with one command
Labelling/mailmerging routines included
Can change structure of existing database
- Impossibly big program for 8256
- Printed output limited – must use mailmerge

MICROFILE

(Sold in The Micro Collection)

£49.95 • Saxon Computing • 0401 50697

Microfile is a well implemented simple database, driven by plenty of menus and on-screen prompts. It's fast and has good screen control, although it has some size restrictions. Microfile comes as part of a software suite, "The Micro Collection", which is good value (Microfile, Microwrite, MicroSpread, Flexifebet and Lock-It)

PLUSES • MINUSES

The price includes competent word processing, spreadsheet, labelling and encryption programs
Plenty of menus and on-screen prompting
Very flexible formatting for screen layout and printing
Numeric fields can be expressions to be calculated
Indexing is fast and can be on several fields
Maximum number of fields per record is only 20
Limited facilities for totalling up fields in a database

SMARTCARD

£59.95 • Focus Computers • 0272 420109

A conventional card index database which is now the nearest thing available to Cardbox. Small and fast, you can sort the records index up to three fields and do simple arithmetic in fields. Can't put background text (eg. titles) on records or printouts.

PLUSES • MINUSES

Good clear screens
Plenty of onscreen help
Fast and high capacity
Easy to use
Can't put background text on printed reports
- No way of exporting data for mailmerge

DATASTORE II

£39.95 • Digita • 0395 45059

Another standard database, written in BASIC and using Mallard's famous JETSAM commands. Is therefore slow in some parts though version 2 is considerably faster than 1. Simple to use, has calculation facilities and a good control over the printed output – your printouts can be made to look very impressive. You have to set the maximum number of records you want before you start, which is tedious, and browsing is slow

PLUSES • MINUSES

Good range of print format commands
Simple to use
Calculation facilities – OK for accounts use
Nice touches eg text automatically adjusts size to fit printout
Must set max. no of records on setting up database
Only two print formats per database
- Slow at browsing through

FILE MANAGER

£99.95 • Sandpiper Software • 0978 355333

A database with the power to handle full relational applications. Unfortunately the manual is so badly written that the power is hard to get to. For the money, there are better systems around.

PLUSES • MINUSES

Potentially a powerful and flexible system
'RAPID' generator can produce simple files quickly
- Appalling manual
- Poorly customised for PCW use
- The full system is very complex to use

HOMEVIEW

£195.44 • Cavalier/Load & Run • 0322 72116

A specialist database for the Estate Agenting business. Costs a lot, but then all you estate agents should be able to afford it from your outrageous commission fees (yes, the 8000 Plus staff are all about to move house). You specify required area, no. of bedrooms etc, and get a list of suitable vendors or buyers. Works well.

PLUSES • MINUSES

Once set up, simple enough for non-computerate staff
Makes up mailshots from LocoScript
Can adjust property categories to suit
Impresses your customers!
- There will always be clients whose requirements don't fit your system
- Very expensive

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IANKEY CRASH COURSE

£24.95 • Iansyst • 01-607 0187

A fairly traditional typing tutor, taking you through basic keyboard exercises. There's a lot of explanatory text, which gets in the way second time around. Definitely competent, but a bit boring.

PLUSES • MINUSES

- Mostly avoids boring letter drills
- Very full on-screen information guides you along
- "Fast" option cuts out some text if it gets repetitive
- Not particularly imaginative use of graphics
- It doesn't always ensure that the cursor is properly aligned with the exercise text

2 FINGERS TOUCH TYPING

£24.95 • Iansyst • 01-607 0187

Despite its provocative name, a useful typing tutor in that it specifically caters for people who can already get by on keyboards with two fingers. You are gradually introduced to touch typing, so your speed doesn't drop while you learn. Fills a necessary slot in the Typing Tutor market.

PLUSES • MINUSES

- Suitable for improving two-finger typists without much drop in speed
- Full on-screen instructions
- Exercise material is interesting text, not letter drills
- Explanation text is annoyingly verbose in some lessons
- It doesn't always ensure that the cursor is properly aligned with the exercise text

GIANTKILLER

£14.95 • Topologika • 0733 244682

A mathematics adventure game loosely based on Jack and the Beanstalk. Lots of intriguing puzzles which should stimulate any student up to GCSE standard. Not the best adventure game ever written but great for making mathematics fun!

PLUSES • MINUSES

- Puzzles plausibly integrated into scenario
- Progression of game is simple and well defined
- Puzzles introduce a lot of valid mathematics
- Program understands only very simple commands
- Saving a position takes a move – can be fatal
- Won't be of particular help in exams

ANIMAL VEGETABLE MINERAL WORLD WISE

£14.95 each • Bourne Educational • 0794 523301

Aimed at the younger market, 7-15 year olds. Both these programs work by learning as the child uses them. Think of an object and the computer tries to guess it. If it is wrong, the child is asked for a question which would allow the PCW to be right next time, and it learns.

PLUSES • MINUSES

- Can be used as many times as the child's imagination holds out
- Performance can be analysed by a teacher after a session
- As you build up a base of objects and questions, they can be saved for reuse
- It needs a lot of typing, hence a lot of supervision
- The PCW starts with only two objects known, so it takes time to get going
- Documentation has hardly been altered from cassette-based versions
- Since it is for young children, more imaginative use of the screen would be nice

BETTER SPELLING

£12.95 • School Software Ltd • 010 353 61 27994

This is a spelling course aimed at the 8 to adult age group. It consists of a series of well organised, short lessons each dealing with one topic, like plurals or which version of there/their/they're to use in a sentence. The use of the PCW screen is rather unimaginative, and doesn't hold your attention.

PLUSES • MINUSES

- Well thought out lessons to emphasise particular points
- Teaches words in a sentence context as well as in isolation
- Lessons can be picked in any order from a menu
- Seems to be proof against mischievous key pressing
- Boring use of the screen doesn't grab interest
- No instructions come as to how to use the program
- Some frills, like the clock and beeper, are annoying
- No flexibility to add questions for a particular syllabus

CHEMISTRY • BIOLOGY

£12.95 • School Software • 010 353 61 27994

These two are fairly traditional question-and-answer tests. You are faced with a choice of 10 topics, and then asked 10 or so questions each, where you have to fill in the blank in a statement. There are preamble notes beforehand, and if you get it wrong you are given a clue. Aimed at 12-16 year olds.

PLUSES • MINUSES

- Questions would challenge a GCSE pupil well
- Preamble notes introduce topics
- The fill-in-the blank questioning style has little flexibility for different answers
- No option to add questions for a specialised syllabus
- Some careless errors, like incorrect facts and hard to decipher chemical formulae

MICRO MATHS

£24.95 • LCL • 0491 579345

Supposedly covering 8 to adult ages, this seems an O-level type program, covering topics from calculus to tables. A good implementation on the PCW with proper use of the screen. Questions are picked at random from a pool, so may repeat but never run out. Replies to questions are typed in mathematical notation, like X^2+3.

PLUSES • MINUSES

- You can pause to use BASIC as a calculator while you think
- "Unlimited" question set
- Comes with a "free" book of AEB O-level questions
- Good hints and explanations when you get an answer wrong
- Questions in a topic repeat occasionally

AMSTAT 1,2,3 AND 4

£30-ish • Coleman • Ashby-de-la-Zouch LE6 5DA

A suite of four statistical routines including a business analysis program. Forecasting and resource management. Individual prices range from £27.95 to £39.95, all four cost £99.95. Sophisticated but perhaps awkward for beginners.

PLUSES • MINUSES

- Good range of statistical functions
- Good manual
- Can produce fair quality graphical results
- Some editing procedures very long-winded
- Needs some expertise to use properly
- Weak on checking that input data is reasonable.

OXSTAT

£113.85 • Medstat Ltd • 0602 411120

This is a specialised statistical analysis package for the PCW. Functions from calculations of means to multiple linear regression are covered, and it can do some rudimentary graphics for results. You can read data from spreadsheets or external devices.

PLUSES • MINUSES

- Comprehensive range of statistical functions implemented
- Good screen editing facilities for entry of data
- The speed seems acceptable, even though it is written in BASIC
- Even complex analyses are easily entered by simple menus
- Weak on graphical presentation of results

YES CHANCELLOR!

£14.95 • Topologika • 0733 244682

Wait! Don't skip over Yes Chancellor! because it calls itself an "economic simulation" program. Instructive and fun to use, you type in your annual budgets (tax rates, public spending etc.) and see your popularity plunge and the economy crash. Great for economics classes, also an amusing game in itself.

PLUSES • MINUSES

- Simple but effective model of the economy
- Comes with booklet explaining economic principles
- Great for teaching economic and political pragmatism!
- Can get boring as a game
- You can't adjust the model of the economy, so it can be too simple

• COMMUNICATIONS •

Communications is one of the glittering areas of computing, gurus would have you believe. It can provide a fascinating hobby for 'hackers', but more importantly it is a valuable business tool.

'Electronic mail' is just what it says: you use your PCW to send messages, which can be documents thousands of words long, to others on the electronic mail system. The best known system of this kind is Telecom Gold, which also allows you to send telexes. Another major system is Prestel, which is more of an information provider – you can read share prices, weather information and other news direct from your phone line.

For any professional service, you pay a registration fee, plus a connection charge – typically around 10p per minute you use the system. Of course, your phone bills are extra. For hobbyists there are also 'Bulletin boards', which are effectively a kind of private electronic mail system run by a system operator (a 'sysop' to those in the know).

To use any service, you will need to buy a modem and an interface. A modem allows you to send computer signals down a phone line, and the interface gets the signals from your PCW to your modem. The pair will set you back £200 or more. Once done, you need some software to allow you to send and receive data, and it is this software reviewed below.

Electronic mail services just send strings of characters to and fro, whereas Prestel is a 'Viewdata' system, meaning it sends pictures and graphics too. Software needs to do more to receive Viewdata graphics, so if you want to use Prestel make sure your software is up to it.

8256UKM7.COM

Public domain (ie. free!)

P.D. software documentation is often poor but this program has an above average document file. UKM7 was written to support ASCII file transfers using error correction and as a dumb terminal either for use over the phone or between two Amstrads. Between two PCW's file transfer is possible at a staggering 31,250 baud which is even faster than PIP! Easy to use for beginners and better than KERMIT, UKM7 provides a cheap and excellent way to communications after you've got fed up with the PCW's MAIL232. 8256UKM7 is available from the Public Domain Special Interest Group, or most bulletin boards supporting the PCW machines.

PLUSES • MINUSES

- Cheap! (the price of a phone call)
- Easy to use, and helpful menus

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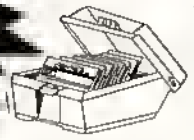

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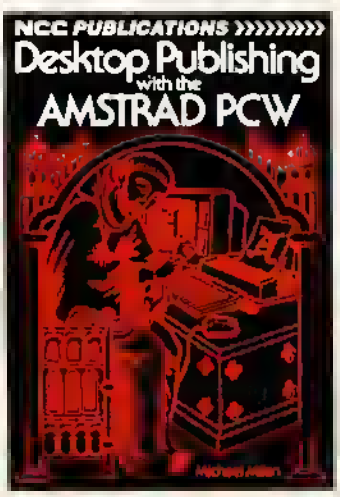

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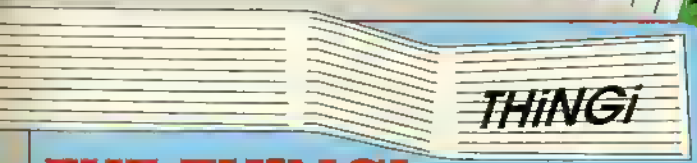

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POST SCRIPT

A glut of glee, gloom and glowering glossed over by a glassy-eyed Ed.

More comment and criticism on vital matters of the day. Under perusal this time are printwheels, piracy, postal delays and portable PCWing. If you have anything to say about anything, this is your chance to be heard: tell us at *PostScript, 8000 Plus, 4 Queen St, Bath BA1 1EJ.*

Russian roulette

I recently purchased a copy, which was supplied on 180K disc, from which I made a start of day disc which booted CP/M Plus, using the 8000 copy routine, and made it autorun by including SUBMIT.COM and a suitable PROFILE.SUB.. When I attempted to load this disc into my PCW 9512 after a few moments it beeped and displayed the message "WARNING. PROGRAM INPUT IGNORED".

Nothing daunted, I cleared the computer, loaded CP/M and then attempted to load from the supplied disc. This time I received the message, "THIS DISC IS AN ILLEGAL COPY" which was accompanied by a locking of the keyboard, so that the only way to clear the computer was to eject the disc and switch off.

I returned the program to my dealer, who tried it on an 8000 series machine, and it ran with no problem.

Perhaps you could also explain why some games will only work on the 8000 series machines, as both these and the 9512 use CP/M, the use of a DMP is not involved, and the 8000 copy routine allows the conversion of 180k discs to 720k format.

"ME? – I WAS CAUGHT WITH A PIRATE COPY OF TETRIS"

Peter G Bell
London

8000 PLUS *Why Tetris doesn't run with a PROFILE.SUB file we've no idea. In fact, why it doesn't run on a 9512 (like many other games) leaves us mystified as well. Our review copy worked fine on ours, but it was a pre-production version without copy protection; obviously the protection routine fouls things up. In theory anything which runs on an 8000 should run happily on a 9512 but this obviously isn't the case. Mirrorsoft say a 9512 version is coming.*

Everyone knows that Tetris is a Russian game, but does anyone out there know what 'Tetris' actually means? ■

Mini Office: The Case for the Defence

I would like to respond to last month's letters about Mini Office Professional.

As you can appreciate, the programming of this suite of programs was a formidable undertaking involving over 18 months work. Debugging the more than 300k of machine code was a major headache due to the complexity of the programs, but we felt it essential to ensure that the programs were free of bugs before we released the package. However, as your readers have discovered, we failed to remove them all.

The majority of the problems referred to in your letters page were put right within one month of the launch in December 1987. Since then we have corrected minor problems as they have materialised, as well as enhancing the package to allow pulse dialing in the communications module.

To date we have sold in excess of 40,000 copies of Mini Office Professional, bringing the total sales of the Mini Office range to more than 400,000 units. We have received many letters from very satisfied customers, but we apologise unreservedly to those individuals who bought version 1.0 and found problems. Any reader who has version 1.3 or earlier can obtain the current version by sending their discs (without the packaging) the The Customer Services Department, Database Software, Europa House, Adlington Park, Adlington, Macclesfield SK10 4NP.

Looking at some of the other comments made by your readers, I would like to say that we thought long and hard about Drive M and decided that there were far more benefits if we used this area to allow users to work with massive spreadsheets (up to 320k in size on a PCW 8512) and long word processor documents (up to 336k on a PCW 8512).

The database module has been carefully designed to cope with the vast majority of applications, but sadly it is not possible to extend the length of fields, nor is it possible on any database costing less than £200! When setting up a database structure it is essential to plan the field lengths and types very carefully before you start entering data, and we do make this quite clear in the manual.

Regarding some of the other comments by your readers, I will be writing to them individually to attend to their queries.

John Hudson
Software Development Manager
Database Software

Copyrights and wrongs

In PostScript (May 88) you state that an owner of a 9512 can transfer their LocoScript 2 to their 8512. I hope you can tell me exactly how to do it as I've tried everything that I can think of and all I get is a message telling me my version of LocoScript is 'incompatible' with my 8512. This hardly surprises me, as I'm too cynical to believe that Amstrad are giving away software that other people have to pay £20 for.

Keith Heron
Manchester

8000 PLUS *Sorry, this was a misprint in your edition, as Locomotive have pointed out to us. The phrase 'Yes' should have read 'No, and don't even think of trying it mate, or you'll be breaking the licensing agreement, you aren't allowed to copy LocoScript 2 from your 9512 to your 8512 even if you own both machines and it won't work anyway'.*

Although there are obviously a lot of pirate copies of any piece of software around, Locomotive have less to fear from it than most as LocoScript 2 is extremely reasonably priced and has an excellent manual, so prospective pirates have no excuse for not buying it. Software copyright is a tricky thing and the moral situation is debatable, unfortunately the legal situation ain't. ■

Name and address withheld

I run a club of 'wrinklies' out in Spain. We use our PCWs for a variety of purposes including playing a lot of games. However, when we tried to copy Scrabble as you would normally do to make a back-up copy, it didn't work. So one of our bright sparks said, if it's not a CP/M program, maybe it won't copy under CP/M, so let's try LocoScript. We did

POSTSCRIPT

this, but the copy we got only displayed the message " *THIS IS AN ILLEGAL COPY***".

To make matters worse the old version wouldn't work either. We realised that (our eyesight) we'd used 'Move' instead of 'Copy' in LocoScript. So we copied the new copy back on to the old disc. We reloaded Scrabble and waited with bated breath... alas, it loaded OK, but will go no further than asking us it we want to play a game continually.

We are all quivering in our shoes that we dare not apply to the makers of Scrabble in case we have done anything illegal which we have never done!

So, knowing what kind honest caring people you are, can you do something for us and get us another copy somehow without revealing our identities? And also – can you please make an appeal for any software makers to mark clearly on the packaging that a disc is not to be copied, even for backup?

Anonymous
Spain

8000 PLUS *You've nothing to worry about, Mrs Wigginton. Scrabble distributors Virgin say they'll be happy to replace the disc so long as you send a covering letter saying how you honestly weren't trying to make a rip-off copy for your friends in Javea, Alicante.*

Games are traditionally copy protected because the main market consists of impecunious minors who are thought more likely to give (or sell) copies to all their friends. 'Serious' software such as spreadsheets or databases tends not to be copy protected; the users are thought to be older, maturer, and richer, making them unlikely to copy such programs. Besides the program is often impossible to use without the, ahem, clear and well-written manual.

But Virgin did agree that it would be a good idea to put something in the manual or on the box saying the disc is copy protected. If a few people write to them about it this might even get done. ■

Sub standards

Why have I had to phone your office four times to find out where my subscription copy of the magazine has got to? In nine months, two copies never arrived, although you kindly sent me another copy when I bought the matter to your attention, and the others arrived any time of the month from the first to third weeks. It is frustrating to see the magazine on sale in the shops while patiently waiting for your own copy to arrive.

As a subscriber I would have expected to have received my magazine before it appears in the shops, or at least on the same day. This, surely, is one of the reasons for taking out a subscription. 'You get your copy right from the printers to your doorstep so no more frustrating searches for a newsagent who hasn't sold out!' you say! Ha! In my experience, no newsagent would have the copy I wanted, it would have been returned unsold weeks ago.

KJ Ransley
Broadstairs, Kent

8000 PLUS *In theory the PO has six days in which to deliver your copy second-class before 8000 Plus appears in the shops. They won't accept bulk first-class mailings (there are around one and a half tonnes of 8000 Pluses going out by post every month). Also, 8000 Plus has a very large number of subscribers – 8,000 – so statistically a few are bound to be delayed every month. Regular delays clearly shouldn't happen – in the past local sorting offices have been shown to be at fault.*

Anyway, we're looking into the possibility of farming out our subscription mailing to a specialist mailing company. ■

Heavy sheet

I bought Mini Office for what I though was a simple spreadsheet application. I have a spreadsheet with a number of rows, and I want to sort the data in ascending numerical order of the number appearing in the seventh row. I have written to Database Software and they say it can't be done though their advert likens their spreadsheet to SuperCalc 2. Can you help?

Miss E MacMillan
Weymouth, Dorset

8000 PLUS *There's no 'sort' facility on the spreadsheet. If only you could export data, you could write a simple BASIC listing to sort it for you – but you can't export data.*

It's no use either employing PUT.COM to send all the printer output to a file and get the spreadsheet figures effectively exported by then printing them, as the file is corrupted by printer control codes. So it looks like you can't do it. ■

Exposed

From time to time I read pieces in your letters page about mail order suppliers not coming up with the goods, or, at least, taking a mighty long time to send them.

Can I ask you, some time in the Future, to do a little expose on the company with its special offers department based in some Old Barn in deepest Somerset.

If you take up this company's special offers, the goods never arrive because, they say, the Martians keep hijacking the Highlighter Pens or the Venusians keep snaffling the colour-coded disk labels!

When patience runs out (after two and three months) and you phone up, the charming young lady on the other end of the line always assures you that the goods will be sent off in the near Future (sic).

Is there any future for Future's future special offers or are they like tomorrow? There certainly doesn't seem much of a future in waiting for January's now that May is nearly here!

David Yates
Kingston-upon-Thames

8000 PLUS *We sent a reporter down to this so-called 'Old Barn'. A would-be spokesperson for the self-styled 'Special Offers', oh yes I don't think, department, wearing dark glasses and refusing to be identified, said: 'We ran out of pens and labels rather faster than we anticipated. Fresh supplies take eight to nine weeks to arrive, and we dispatched the latest lot yesterday – so Mr Yates should have his by now. Unfortunately we've just run out again, so if you've just ordered some, it may take a few more weeks.' She then beat up the reporter.* ■

Listing after something

I bought Mini Office for my PCW and have spent the last two months downloading a pitiful handful of listings by trial-and-error using Microlink. I can type these listings to screen, view them, save them – anything except run the wretched things!

On attempting to RUN the programs I merely get a 'Direct command found' message. Please, what obvious stage am I missing?

Mrs P Miller
Gtasshouses, Harrogate, Yorkshire

8000 PLUS *'Direct command found' is the message you get if you try to run a BASIC listing which has (surprise surprise) direct commands in it – ie. a line without a line number at the beginning. It follows that if you've saved the listing in such a way that long lines are broken into two, you'll get this message.*

Try having a look at the listing in a word processor (in LocoScript, insert it into a blank document using 'Insert text'). Five gets you ten there'll be one or more lines broken – just unbreak them by deleting the [RETURN]. Save the amended listing.

PS – this is illegible

Having read in April's 8000 Plus of the new Thesis PS daisy wheel for the PCW 9512, I got my local dealer to get me one.

make an ASCII file of it and try running that. ■

Disgusted

I am writing to protest in the strongest possible terms at your unsportsmanly behaviour by commencing a series of articles explaining how to use 'Mini Office Professional'. Do you think I would have purchased this software if I had actually wanted to USE the database? Where is the fun in a spreadsheet that does what it is told, first time? And, as happy as I am with LocoScript 2, why do you think I want another word processor, it not for the fun of conquering the manual??

I admit that instructions for the graphics program are disappointingly easy to follow, but have found that this is more than compensated for by the challenge of incorporating spreadsheet data directly on to a graphics file. And you intend to make such knowledge freely available!! Why are you doing this?? Can you imagine the uproar there would be if you printed the full solution to every adventure that came on the market? Just because this is in a less conventional form than, say, 'The HitchHiker's Guide to the Galaxy', is no reason to spoil the fun.

Cast your mind back to your first encounter with 'The HitchHiker's Guide to the Galaxy'. Think back to the sense of achievement you felt upon confounding one small hole, one hook, a drain, a panel and two exasperating robots just to shove a space-age guppy in your ear. Or the determination and tenacity which built up little by little every time you were blasted into little bits and smeared over the universe. Well, can't you see how much more subtle this program is? A fully workable package with no booby traps, other than the manual, but twice as frustrating. Brilliant!

If we were talking about any lesser magazine than 8000 Plus, I would think that you had been taken in and hadn't realised that this is a most sophisticated game, and not an office package at all. Having blown the database, I would beg you not to cover the communications section as I am still saving for a modem in order to participate in what will surely be the most confoundedly difficult climax yet devised to any adventure. Please don't spoil my fun.

Margaret Hutber
London

Disc Recovery

I think I am now getting on top of the disc doctoring again, despite getting a continuous supply of them

"TROUBLE IS, I CAN'T UNDERSTAND THIS MANUAL EITHER"

referred on by Locomotive Software and Amstrad. I have improved some of the salvage techniques and am automating others.

I think therefore that I can now handle more problems and so I'll repeat my original offer – anyone who has a corrupted disc with vital data can send it to me with a blank formatted disc. I'll do my best to retrieve what I can. I've farmed out some of the more tedious tasks so there's now a small fee for my local helpers. All profits go to the BACUP Cancer Counselling charity.

David G Smith
Kent

8000 PLUS *A very useful service and a very worthwhile cause. Send duff disc, with blank formatted disc and return postage to:*
Dave Smith, 41 Tutsham Way, Paddock Wood, Kent,TN12 6UA. Tel: 089283 5974. ■

Ripoffs

Having just become a subscriber to your magazine and ordering some back issues, I have noticed that once upon a time you used to have available to lesser mortals like myself 'TIPOFFS The Collection: Issues 1-6' for the small price of £3.95. Is there any remote possibility that this vital publication will once again be on sale? Please say yes.

A A Stultz
London

8000 PLUS *Sorry, there are no plans to reprint it at the moment – we'd have to do it in a run of several thousand to make it worthwhile. You shouldn't need it, though – we've been re-running the best of the early tips (modified for LocoScript 2 too) in our 'Desert Island Tips' series in Tip Offs for the six months or so. Back numbers still available while stocks last!* ■

It produces results which are dramatic, if unintelligible. I enclose a copy of this letter in Thesis PS to illustrate my point.

I don't know how to make it print English. Neither does my dealer. When he rang Amstrad, they seemed unaware of any problem: admittedly he only spoke to the sales staff, and is now trying to contact the technical people.

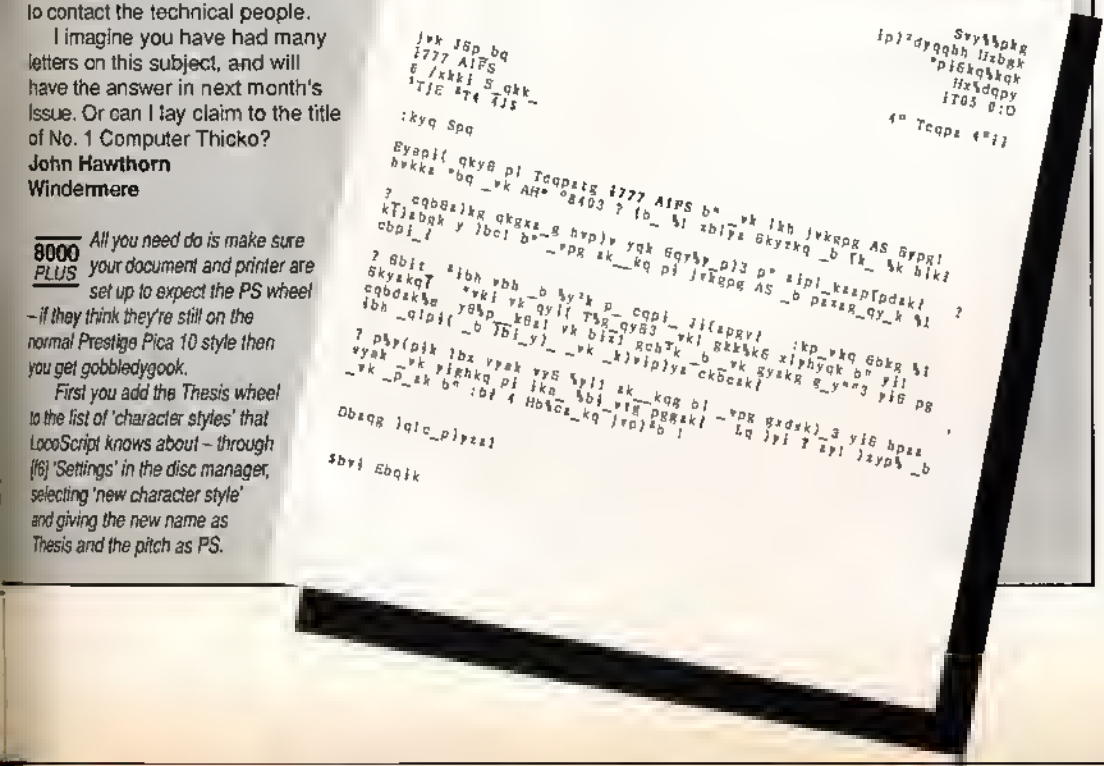
I imagine you have had many letters on this subject, and will have the answer in next month's issue. Or can I lay claim to the title of No. 1 Computer Thicko?

John Hawthorn
Windermere

8000 PLUS *All you need do is make sure your document and printer are set up to expect the PS wheel – if they think they're still on the normal Prestige Pica 10 style then you get gobbledygook.*

First you add the Thesis wheel to the list of 'character styles' that LocoScript knows about – through [f6] 'Settings' in the disc manager, selecting 'new character style' and giving the new name as Thesis and the pitch as PS. Write it to your startup disc under SETTINGS.STD by following the prompts.

From now on, if you want a document to be printed with this wheel, set it up through [f1] selecting 'Document setup'. Press [f6] 'Printing' and choose 'character style' setting the option you want, Thesis, with the [+] key. When you come to print out you'll be asked if you want to change from the current style (probably Prestige Pica 10) to that intended for the document (Thesis), so take that option.



Take it away

As I sat on the beach in the Gambia, soaking up the sun while wrestling with the unbelievably tedious process of using pen and paper (I am a writer by the way), I sighed with longing for my PCW, wishing I could have packed it, along with the suntan oil, bikini and sunglasses.

When I returned home, I found your excellent magazine waiting on the doorstep and inside was an advertisement for the new portable PPC. It seemed the answer to my prayer, for I am often away from home (not, I hasten to add, solely on holiday) and would find such a machine invaluable. I hotfooted round to my friendly Dixon's store, marvelled at Mr Sugar's genius in producing something so compact and lightweight and then found that it was not compatible with my PCW.

I rang Locomotive software who confirmed that LocoScript 2 could not be used on the new portable PPC and that they had no plans for producing such a version. When I humbly suggested that there might be a

market, they said that it wasn't as easy as all that!

I acknowledge that I am pretty much of a computer illiterate: I use my PCW's word processing capabilities to the full in writing books and scripts, but other than working out a layout for my income tax return, I have never explored all the other exciting possibilities which I know are available. I have been well satisfied with LocoScript 2 and would not want to use another word processing package especially if I was working on the same material.

I think I understand, however, why the two machines are not compatible – isn't it because the PCW is based on CP/M while the PPC is based on the IBM system? – but surely I can't be alone among PCW users who would go out tomorrow and buy a portable PCW if one were available.

As you are such a powerful magazine with access to the counsels of the great, could you let me know whether any such animal is being contemplated, or whether a hybrid version of the new PPC with the relevant serial interfaces and connections would be possible?

Avrif Rowlands
Worcestershire

8000 PLUS *So many PCW owners would pay for portable word processing with LocoScript it seems such an obvious market it's surprising no-one's exploited it yet, though the late lamented Nabitchi were reputedly working on a rehoused portable version of the PCW when they went into liquidation. At the moment the best compromise if you want to make notes in the library, out on your archaeological dig or on the beach in the Gambia, is still the Cambridge Z88. It uses its own rather idiosyncratic word processor which is also a spreadsheet. We covered file transfer between Z88s and PCWs in last October's 8000 Plus (issue 13). There were a few rumours of a portable PCW from Amstrad, but they're only rumours.* ■

Poked up to the 9s

In the March edition of 8000 plus you featured a program called the "Variable Lister" which I entered into my 9512 and found it would not direct output to my printer. I contacted your office by telephone to ask if you knew the correct pokes to use the daisy wheel printer, your staff said they didn't but would find out and publish it in the April edition.

I note in "Gremlins Corner" you have featured several amendments to this program but there is no mention of using a 9512 printer. Are we to be forgotten? Does the fact that your magazine cover bears the numbers 9512 in its logo mean nothing? Surely I am not the only reader programming on a 9512.

How about rectifying the problem for me and all the other confused programmers?

P O'Hatloran
Norfolk

8000 PLUS *We still don't know what the pokes are – can any friendly hackers out there help us?* ■

Bold washes out

Why isn't the LocoScript bold command obeyed to the end of the document?

Using LocoScript 2.12 I often want to print a document in draft quality in bold, and insert the Bold command at the beginning of the document. I find that after about 50 lines, the print suddenly, from one line to the next, ceases to be bold. If I want bold to the end, I have to insert a second Bold command just before this 'reversion' to unBold occurs. Why does the first Bold command not remain in force until the end of the document?

Dr Andrew Herxheimer
London

8000 PLUS *There was a similar bug in early versions of LocoScript 2, but it's said to have been fixed. If you're sure it is a bug – i.e. that it really does revert to bold by itself and that you haven't put in any layout commands or anything – write to Locomotive. They're pretty good about fixing bugs quickly.* ■

Change your Check

When I first ran your Font Definer program (8000 Plus, April 1988), it didn't work properly, even though I had keyed it in correctly according to the Basic Checker printed in the same issue. Then I discovered that in line 280 of the Font Definer I had typed CHR$(149)=" " instead of CHR$(149)+" ". Despite this mistake, the Checker had produced the same checksum, 12D9, for my line as for the line printed in the magazine. Do you have any idea what percentage of errors Checker might miss in this way?

Peter G King
Bristol

8000 PLUS *The Checksum listing ignores spaces when it produces its checksum of each line, so of course your single-space version scored the same as the double-space version. It also treats lower and upper case letters the same, so PRINT CHR$(27)+"E" (which clears the screen) and PRINT CHR$(27)+"e" (which turns on the cursor after you've turned it off) would score the same.* ■

Beyond our Ken

Any idea how Drive A became dedicated to Ken? A friend, asked me how to get rid of the message which had appeared on her disc management screen against Drive A and I was rash enough to say that she must be mistaken: that she could not possibly have put anything in that space. She promptly supplied the offending disc and there he is and won't go away.

She has nothing against Ken and is quite content to tolerate this permanent reminder of his existence but I am now anxious to know how he could have got there and how to exorcise him.

She could, of course, copy all the files on to another disc and reformat the present one but that seems rather an inelegant way of disposing of him.

R S Morrison
Isle of Lewis

8000 PLUS *You can rename Ken's disc in LocoScript 2 through [f2] 'Disc' in the disc manager. This is how it got dedicated originally. The disc name can also be set using SET – see this month's CP/M article.* ■

Save £££

For use on my PCW 8512 I have a copy of Supercalc 2 with which I am otherwise well satisfied, but the inability of the program to generate a "£" sign does unfortunately limit its value for issued reports and serious use generally.

I have seen somewhere that it is possible to overcome this rather glaring deficiency for us UK types obsessed with £££s – even if we do not have that many of our own to count! Please can you help before I resort to taking up head-banging as a hobby?

Michael Dyer
Shrewsbury

8000 PLUS *If you put in your CP/M disc (side 2 on the 8000s) before running SuperCalc and type* LANGUAGE 3 *then the # key will produce a £ sign* ■

Mouse Training

I enjoy writing (or trying to write) programs, and typing in listings from Listings Plus and I would like to know if it is possible to include mouse control in a BASIC program, and, if so, how this is possible. There are many Listings Plus listings that could benefit from mouse control.

Secondly, I was reading with interest your review of Ocean's MATCHDAY II (Light Relief, April 1988) which, without a doubt, shows a PCW screen shot with three colours – black and green, as normal, but also white.

Is this some top secret technique, or can it be used in BASIC programs? If so, how?

Oliver Burkeman
York

8000 PLUS *Mice generate an x and y coordinate which is altered when the trackerball moves, and also a variable telling you what state the buttons are in. Take the Kempston mouse as an example. It sends this information to various ports – the x-coordinate to 208, the y to 209, and the button state to 212. Details would be in the mouse manual.*

With the following lines in your program as a subroutine then after each call of it you would find that the cursor coordinate was (x%,y%) and leftb%, rightb%, or bothb% would be –1 if the left, right, or both buttons, were down respectively.

```
1000 x%=inp (208) : y%=inp (209)
1010 button%=inp (212)
1020 leftb%=(button%=253)
1030 rightb%=(button%=254)
1040 bothb%=(button%=252)
1050 return
```

You can then use x% and y% in your main program – to place text, symbols or graphics at that point with CHR$(27)+"X", for example.

Those colours are a trick of the light; camera film rarely prints out colours as the eye sees them. The most curious example was when the 9512 with its famous white screen came out; this showed up as green on any colour shot. For our pictures on the 9512 review edition of 8000 Plus we had to convert the green on the transparencies back to white so that all the references in the text to the white screen would make sense! ■

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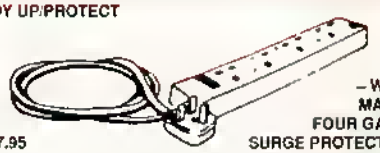

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£29.95 • Database Software • 0625 878888

Mini Office is a suite of five integrated programs: database, word processor, spreadsheet, graphics module – and a comms package which is as comprehensive as anything else on the market. It can display both ordinary text screens and the 'Viewdata' block graphics used by Prestel. You are allowed baud rates from 75 to 9600, separately set for transmit and receive, straight terminal emulation for use with Telecom Gold, and XMODEM and KERMIT file transfer protocols for error-proof transfer of long files. Would be well worth the money just by itself – and of course you're getting four other very good programs as well.

PLUSES · MINUSES

- Very comprehensive – a genuinely useful comms package
- Ordinary text and 'Viewdata' block graphics
- Can save setups under names and recall them, so you only need work out your baud rates/parities once
- You can set keys to return strings, such as Telecom Gold passwords
- Comes preconfigured to use Prestel and Talacom Gold
- Manual is of very little use

CHITCHAT

E-MAIL/VIEWDATA/COMBO

Sagesoft • £69.99/£69.99/£99.99 • 091 284 7077

Two communications programs for the 8000 series machines that have been around for a good time now. Most of the features you will need are here: message text editor, preprogramming unattended tasks (if you use a suitable "intelligent" modem), directory of stored numbers, copy to printer, and a very useful connect time clock so you can watch your phone bill climb! E-mail is used for simple text phone links like Telecom Gold, whereas you'll need Viewdata if you want to use Prestel. The Combo pack contains both E-mail and Viewdata.

PLUSES · MINUSES

- Good, clear documentation
- Easy for first timers to use
- Built in text editor for pre-sending message preparation
- Pre-definable tasks executable at any preset time if unattended.
- No error corrected file transfer (i.e. Xmodem or CRC)

DIALUP

£89.99 • PMS Communications • 021-643 7688

Offers both E-mail and Viewdata operations. Very easy to use, and offers an XMODEM transfer protocol unlike Sage ChitChat. If you are buying a modem too there are some cut-price bundled deals to be had, eg the Miracle Technology WS4000 modem.

PLUSES · MINUSES

- Simple to use
- Comprehensive file transfer commands, including XMODEM and the increasingly popular KERMIT
- Runs from the M drive
- Manual is not PCW specific, and the references to 5.25" discs are tedious

COMM+

£86.25 • NewStar • 0277 220573

This single package combines both ASCII and full Viewdata block graphics and Telesoftware downloading. A very powerful command language allows you to look for particular messages coming in and take actions, even while doing other things. Its use is only limited by your programming ability.

PLUSES · MINUSES

- Very comprehensive and well indexed ringbound manual
- High quality Viewdata graphics
- Well presented on-line help menus for use by beginners
- Autodialler program works with most manual modems
- Telesoftware downloading facility, with CRC/Xmodem checking
- Very powerful command language, doesn't need much programming skill to learn
- Not recommended for absolute beginners to communications

£8.95 each.

PLUSES · MINUSES

- Features a C tutorial
- Comprehensive implementation and massive manual
- Not for the newcomer to programming

PASCAL

£39.95 • Hisoft • 0525 718181

A standard full Pascal compiler

PLUSES · MINUSES

- Well integrated text editor – when you hit a compilation error you are returned to the correct point to edit it
- Short compilation time, economical on memory
- Manual makes no attempt to teach you Pascal.

THE VICAR

£29.95 • Iansyst • 01-607 5844

A programming tool for serious programmers. If you have a several-hundred line program held in several files on a disc, you can lose track of which variables are used where. The VICAR produces a concordance listing and other diagnostics, to help you find bugs and maintain the program.

PLUSES · MINUSES

- Easy to use but still flexible through use of options
- Amstrad versions all at a special low price
- Good manual
- Only of value on large programs
- Limited value to most PCW users (except BASIC buffs)

MODULA 2

£45.00 • FTL/Grey Matter • 0364 53499

A compiler. Modula-2 is the successor to Pascal, good for large programs requiring separate compilation.

PLUSES · MINUSES

- Full implementation with extensions.
- Includes libraries of predefined modules
- WordStar-type screen editor included
- Compilation process is long-winded and not for beginners

• PROGRAMMING •

Programming languages come as either 'compilers' or 'interpreters' – compilers pre-process the program into machine code, so are much faster. The PCW's standard Mallard BASIC and LOGO are both interpreters. Compilers are generally more cumbersome to use than interpreters, but have obvious benefits.

With language compilers in particular it is difficult whether they are reliable and efficient without spending many weeks working with them, impossible for a brief review. If you use a specialised programming language and have any comments that would help us compile a good software file entry for it, we would be pleased to hear from you.

HISOFT C

£39.95 • HiSoft • 0525 718181

A very good C compiler, fast, produces good compact code.

PLUSES · MINUSES

- Compiles program into ordinary CPM .COM file
- Produces compact code
- Fast and inexpensive
- No floating point arithmetic

ARNOR C

£49.95 • Arnor • 0733 239011

Good compiler with floating point arithmetic, but not as fast or as cheap as HiSoft C.

PLUSES · MINUSES

- Excellent integrated text editor
- Floating point arithmetic
- Cumbersome to produce .COM files, needs special run time support program
- HiSoft C is faster and cheaper

LFORTH

£19.95 • Hisoft • 0525 718181

Forth is an unusual language, somewhere between assembler and C. This is one of the few compilers available for the PCW.

PLUSES · MINUSES

- Comes with a Forth editor
- Quick and efficient implementation
- Manual doesn't teach you Forth

MIX C

£29.95 • Advantage • 0844 52075

American C compiler. You can buy a full screen editor with it for £19.95 extra. Also machine code assembler & examples for

CBASIC

£45.00 • Digital Research •0635 35304

Compiler

PLUSES · MINUSES

- Easier programming tool than conventional BASIC interpreter
- Very similar to BASIC, so easy to learn
- No text editor – must split your programs into 200 line chunks for RPED to work on
- Programs work no faster than they would in conventional BASIC, sometimes slower

IT'S BASIC (VOLS 1 AND 2)

£7.95 each • Nabitchi • 051-708 8775/0123

Games with a more serious intent. These discs provide 20 simple games and applications each, and allow programmers to look at the BASIC to see how it's done and to adapt it for their own programs. You can play music on your CP/M and create your own Space Invader figures.

PLUSES · MINUSES

- Twenty programs at rock bottom price.
- Invaluable tips for programmers.
- Costs little more than a blank disc.
- No tutorial guidance.
- Non-programmers may get bored.

NEXT MONTH

The guide continues with the categories of SPREADSHEETS, GRAPHICS and GAMES . The month after that will cover WORD PROCESSORS, ACCOUNTS/ PAYROLL, UTILITY and DTP software, and the month after that it's back to this month's topics.

Our intention is to keep publishing the three parts of the guide in rotation, updating it each month to include all new products. If you would like to see other sections of the guide, back issues of 8000 Plus are available at £1.75 each.

Meanwhile, if you are aware of any significant omissions or errors in the File as published, please let us know. We intend to maintain it as THE authoritative guide to PCW software.